**Medical Officer's annual report [to] Durban Corporation.**

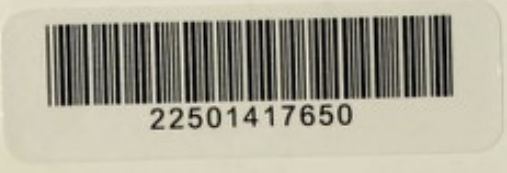
# CITY OF DURBAN


## Annual Report

OF THE

# CITY MEDICAL OFFICER OF HEALTH

**YEAR ENDED 31st DECEMBER, 1972.**



# ANNUAL REPORT : 1972



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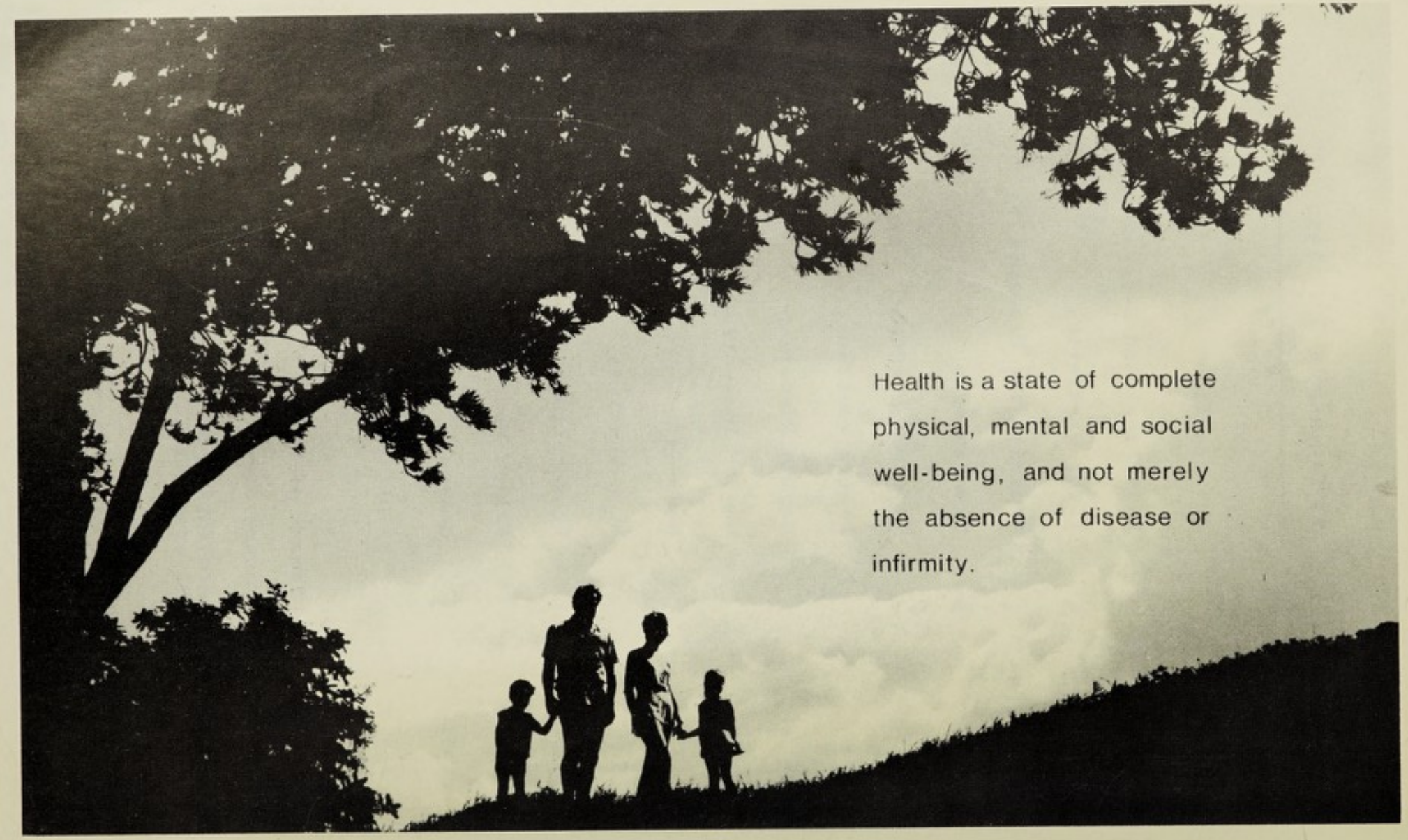
Health is a state of complete
physical, mental and social
well-being, and not merely
the absence of disease or
infirmity.

City Health Department,
9 Old Fort Place,
DURBAN,
4001.

July, 1974.

His Worship the Mayor and
Councillors of the City of Durban.

Mr. Mayor, Ladies and Gentlemen,

It is with pleasure that I present, in terms of Section 13 of the Public Health Act, as amended, the 70th Annual Report on the public health of Durban which also incorporates an account of most of the activities of the City Health Department during the calendar year 1972.

The delay in issuing this report was occasioned by a grievous lack of staff, not the least of which was the passing to Higher Service of my friend and deputy Dr. G. Hilton-Barber early in 1973. The position was further aggravated by the inability to fill consequential vacancies. In my forthcoming Report for 1973 I shall treat with Dr. Hilton-Barber more fully, as that is where an obituary properly belongs.

Expansion of the City commercially, industrially and as a major holiday resort of the Republic of South Africa continued.

Some idea of the immensely exciting and historically interesting background of this City, whose estimated population at the end of 1972 was 770,747 is given in the first chapter.

Generally, public health conditions remained at a satisfactory level and no cases of formidable epidemic diseases occurred, although a particularly close watch was kept on the world epidemiological situation, especially in regard to cholera, yellow fever and smallpox, all of which occurred south of the Equator during 1972. Awareness of the fact that cholera often presents clinical symptoms of mild diarrhoea and that other diarrhoeal diseases can be responsible for deaths makes it apparent that the disease can be introduced and not be immediately distinguishable from other diarrhoeal diseases, a situation leaving little room for complacency.

Only in the instances of viral hepatitis, meningococcal meningitis and tetanus were there increases in the number of notifications. In the case of viral hepatitis the figure ran to 219 compared with 152 in 1971, although whether this is a true increase or stems from more conscientious reporting is a moot point. The increase in meningococcal meningitis is not of significance and in the

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case of tetanus the figure of 17 is the lowest on record except for last year when there were only 11 cases. Seven cases of diphtheria occurred, a far cry from the 361 of 23 years ago. Continued co-operation by the public in the immunization of children instead of possible complacency at the relatively few cases will keep the toll from this dread and preventable disease low. Constant vigilance is called for in regard to poliomyelitis and any decrease in the immunization state of the population at risk could well result in a substantial increase in this disabling disease. It is of interest that of the 36 cases of malaria, all imported, six were due to P.vivax, the rest being caused by P. falciparum.

Pulmonary tuberculosis still remains the major non-environmental problem confronting the City although it is noteworthy that the incidence, except amongst the Coloured community, continues to show a decline. With improving socio-economic standards especially amongst the Bantu and Indian communities the position can only improve, as the existing curative and preventive measures are highly intensive.

The main cause of death amongst the Whites, Coloureds and Indians was to be found in diseases of the circulatory system, a third-ranking cause amongst the Africans whose prime cause fell under the heading of respiratory diseases. However, accurate statistical figures for the Bantu are wanting as so many deaths are recorded as "ill-defined".

Infant mortality rates in the White and Coloured communities showed a slight not really significant increase, but for the third consecutive year the Bantu rate which has always been by far the highest fell to 77,39 per thousand live births. A further fall in this still most unsatisfactory rate will undoubtedly occur with higher standards of living, general education and intelligent family planning and provided the direct preventive health measures remain at a high level.

Family planning programmes were accelerated and will continue to gain impetus in the coming years as here lies one of the most powerful weapons in the community health armamentarium in the struggle to increase the quality of life in the community as a whole.

Child health clinics continued to enjoy public confidence as demonstrated by the high attendances. Cases of kwashiorkor should never occur in City children as all clinics are free and the State-subsidised milk powder scheme is available for those requiring assistance. Home visiting, so essential to the well-being of the community embracing as it does facets of family life from family planning through infant care and mental health to geriatrics was maintained, although not at an ideal level.

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Immunization against smallpox, poliomyelitis, diphtheria, tetanus and whooping cough remained at a satisfactory level. The routine schedules were revised and measles vaccination introduced amongst the Bantu community towards the year end. This vaccine is not State-subsidised and its provision together with rubella immunization for high school girls represented a praiseworthy step by the City Council, which bears the full cost of both programmes.

All members of the staff are expected to play a part in general health education, although the special section of 21 persons devoted to this task played a most significant role, particularly amongst the lower socio-economic groups. Environmental hygiene suffered as the staff situation continued to deteriorate to an alarming extent. Despite the growth of the City and the calls on the Department in this field, the number of inspections decreased: in 1968, for example, 227,395 inspections were carried out but only 191,047 in 1972. That the general environmental sanitation and standard of inspectional work remained high is indeed a tribute to such a heavily burdened staff. Illegal trading in the City centre showed little signs of abating despite the co-operation of the South African Police. Replacement of certain inadequate beach-front restaurants with premises of suitable size and design remained unresolved and a source of public health concern, especially during holiday periods when the available resources are stretched to the limit.

Progress in water metering proceeded apace and this measure can be expected to reduce wastage of water, seepage and ponding of water and the consequent nuisances. The 18-year plan of sewerage reticulation continued, albeit at a slower pace than before, indeed a cause for disappointment as apart from premises utilising septic tanks, over 120,000 pails were still being serviced in June 1972.

The finding of Anopheles funestus in the course of malaria prevention routine programmes gave cause for concern, more particularly as this carrier of endemic malaria has never been found south of the Tugela River according to records of malaria as far back as the epidemics of 1904-5 and 1929. Mosquito surveys were intensified and much drainage work put in hand. Over 26,000 Anopheline larvae were collected and examined departmentally, when some 350 A. funestus were found. However, with constant vigilance, surveillance and public co-operation it is anticipated that this City can hope to be malaria free.

In Appendix C can be found a short account of the monitoring of Durban's Sea Sewage Outfalls and it is indeed most gratifying to record that at the time of writing this report the quality of the sea water at Durban's recognised bathing beaches remains excellent, judged on the most stringent of standards.

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Housing demands in the middle income and particularly the lower income White groups remained unmet and difficulties due to lack of available land and ever-increasing building costs accentuated the problem.

For the Coloured community the problem was indeed extremely vexing, the demand for accommodation in relation to population being extremely high with little land available and the City Council unable to make any house or flat allocations during 1972. The Department of Community Development was able to make only a limited contribution to solving the problem. Action, in terms of the Slums Act, had to be deferred to avoid further aggravation of the situation. However, future prospects are less bleak as it is anticipated that more land will become available and both the Department of Community Development and the City Council have various housing schemes either in hand or in the course of planning. Despite these activities, which will doubtless be intensified, the problem will not be overcome for several years.

Housing of the Indian community suffered as a result of a lack of funds from the State. The mammoth housing complexes planned for Newlands and Phoenix showed little progress although land acquisition continued. Some slight alleviation of the problem in 1973 can be expected when schemes being developed by the State Department of Community Development in areas adjacent to the City come to fruition. None the less the problem remains enormous when viewed in the context of future requirements.

Again lack of funds slowed down progress in African housing as the schemes north and south but outside the City being developed by the State were curtailed.

In the wake of the unhappy housing position currently existing amongst the lower socio-economic groups of the community, illegal shack development in and around Durban will be inevitable and this in turn must pose many and difficult attendant evils detrimental to the public health of the City.

To His Worship the Mayor and City Councillors of Durban I extend my warm thanks for their interest in public health matters and in particular to the Chairman and Members of the Health and Housing Committee for their encouragement and support. The assistance and consideration afforded this Department by other Departmental Heads and their staff is acknowledged, whilst the helpfulness of the Municipal Service Commission is much appreciated. To

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the South African Broadcasting Corporation and the Press I reiterate my keen appreciation of their interest in public health matters and their co-operation in drawing the attention of Durban's community to the many important and interesting matters of public health and preventive medicine affecting the City, and more especially for acting as most valuable lines of communication between my Department and the public.

In conclusion I extend my special thanks to each and every member of my Staff for their loyal support, team spirit and sustained high standard of work.

Yours faithfully,

C.R. Mackenzie
M.B.; B.Ch.; D.P.H.; D.T.M. & H.(Rand); F.R.S.H.; F.I.P.H.; Honorary Senior Lecturer in Public Health Administration, University of Natal.

CITY MEDICAL OFFICER OF HEALTH

# I. HISTORICAL AND GEOGRAPHICAL

## (a) Historical

Tradition would have it that the Phoenicians circumnavigated Africa. It would follow then that in all probability they were the first people from the civilised world to look upon our shores.

It was only many years later, however, when the first recorded sighting of the Bluff, Berea and other familiar landmarks of what is today Durban was made by the Portuguese explorer, Vasco da Gama. That historical sighting took place on Christmas Day A.D. 1497, over 300 years before the arrival here of Lieutenant F.G. Farewell, the pioneer of Durban.

In 1828 Chaka, King of the Zulus, ceded to Nathaniel Isaacs the district comprising the site of Durban, but it was not until 1835 that the settlers decided at a public meeting to lay the settlement out in streets and to name the town D'Urban after Sir Benjamin D'Urban, the Governor of the Cape Colony.

By 1845 the population had increased to 500 and Mr. Martin West, the first Lieutenant Governor, was appointed. In 1854 Durban was proclaimed a borough, the population having increased to 1 204 persons.

In 1866 there were only 731 houses in the borough of Durban and the provision of suitable drainage, cleansing services, slaughter houses and sanitation generally were receiving the attention of the Council which in 1874 appointed Durban's first Medical Officer of Health, Dr. Julius Schulz, M.D.

Durban, being in direct communication with the East, was particularly vulnerable to invasion by the dreaded diseases of cholera and plague, but there was surprisingly little malaria, Dr. Schulz mentioning but a few deaths from this disease in his report of 1888. At this time diphtheria was rife and there were no means of prevention. It was the enteric group of diseases, however, that caused Durban's first Medical Officer of Health the most anxiety.

By the turn of the century Durban's population had grown to some 57 000 persons of whom half were white. With the 1900's came plague which broke out in 1902 with a very high mortality rate. Durban paid the price for being a busy seaport, as there was no doubt that the infected rats connected with the last case of plague reported in Durban in 1912 had been introduced from India. The Health Department

learned a valuable lesson from the plague outbreaks which resulted in the establishment of a strong rodent control section, and there has been no case of plague in Durban since 1912.

The victory over plague eliminated one problem, but in 1905 there were 3 500 cases of malaria. Progress with malaria control was slow and as late as 1935 there were 1 175 cases in the borough.

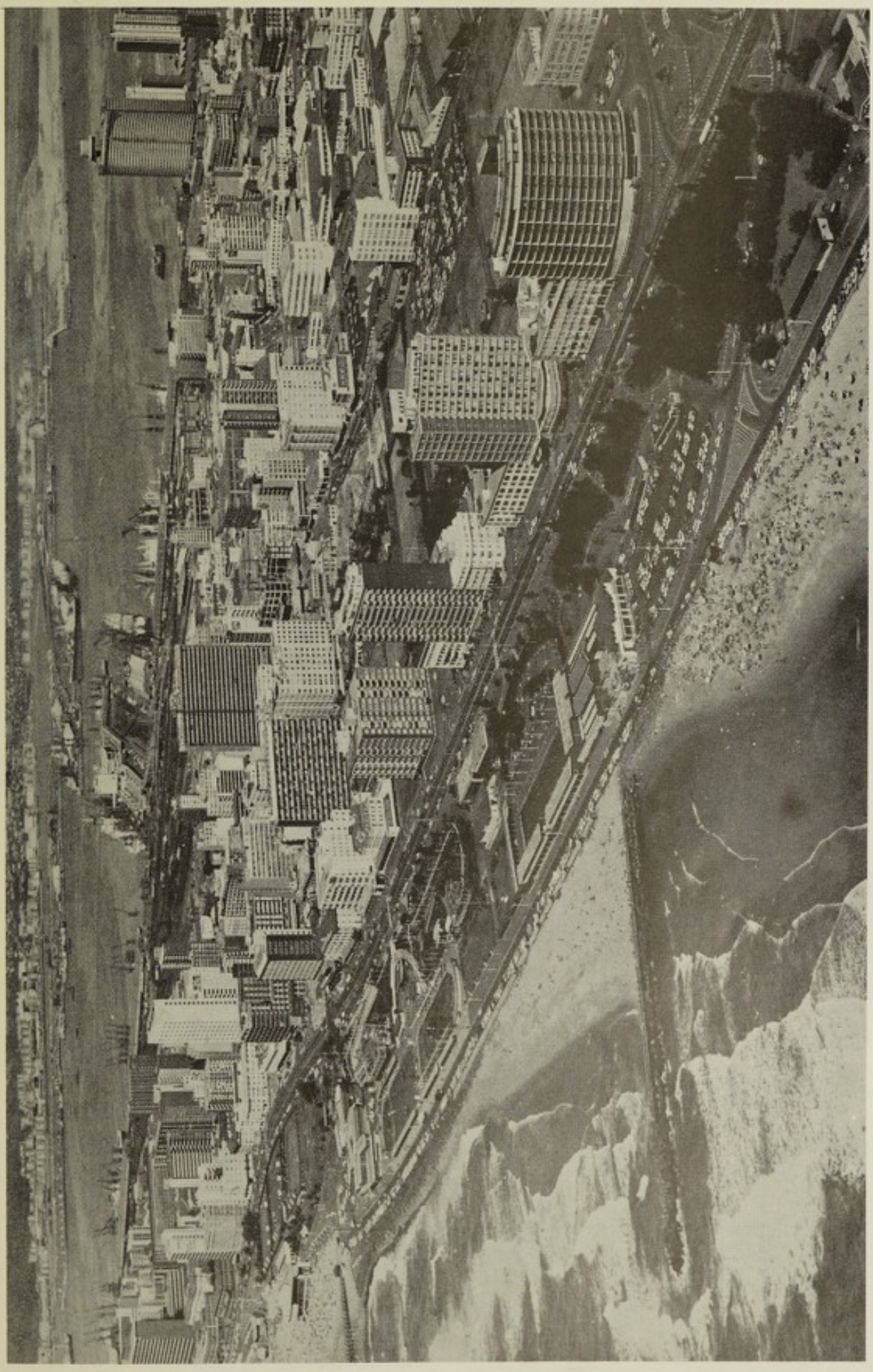
By 1928 Durban had its own milk bylaws to ensure an improved standard of milk supplies, and in 1931 the first full-time Veterinary Officer was appointed. By this time the Child Health Section of the Health Department had been operating for ten years and interest was being shown in Health Education.

At the request of the Town Council, the Provincial Council in 1929 appointed a commission, and as an outcome of the evidence given by the Town Council the five adjoining health board areas were incorporated into Durban. The municipal area now increased from 13 to 65 square miles and the population from 126 000 to 215 000 persons, so doubling the duties and responsibilities overnight. Large expanses of the newly incorporated areas lacked proper drainage and water supplies while the use of rainwater tanks and primitive sanitary accommodation added to the town's potential health hazards.

The outbreak of World War II saw a tremendously increased demand on the port's facilities; large labour forces were employed in the harbour area and also to meet the needs of the rapidly expanding industries. The influx of this labour force which consisted mostly of Africans, led to the development of a large shack settlement known as Cato Manor. This settlement, extremely primitive in character, was to remain a festering reservoir of disease for many years before being eliminated entirely and replaced by properly serviced housing schemes and hostels for the African population.

By 1960 Durban's population had soared to 590 204 persons, and this year the figure is 770 747 persons.

As the scope of public health widens with the population size, so increasing interest is being taken in the problems which present themselves, such as air pollution and urban decay, the effects of modern-day living on mental health, the population explosion and the public demand for up to date geriatric services. Thus the City Health Department's preventive and promotive function in safeguarding the health of Durban's inhabitants is being continually challenged.



## METEOROLOGICAL DATA

| 1972 | 24 Hours Shade Temperature (0°C) | | | Relative Humidity | | | Barometer Readings (Millibars) | | | Rainfall | | | Sun-light |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month | Max. | Min. | Mean | Max. | Min. | Aver. | Max. | Min. | Mean | mm | No. of days on which rain fell | High-est fall (mm) | Average hours of sun-shine per day |
| Jan. | 34,7 | 18,4 | 25,1 | 100 | 47 | 78 | 1020,7 | 1000,4 | 1011,6 | 60,6 | 9 | 44,2 | 7,06 |
| Feb. | 33,6 | 16,4 | 23,3 | 98 | 40 | 79 | 1020,7 | 1000,2 | 1012,7 | 177,8 | 20 | 35,6 | 6,19 |
| Mar. | 32,1 | 14,6 | 23,6 | 97 | 37 | 78 | 1024,6 | 1005,5 | 1015,2 | 40,5 | 12 | 24,3 | 6,40 |
| April | 30,6 | 13,6 | 22,2 | 98 | 13 | 77 | 1025,6 | 1000,2 | 1015,2 | 51,7 | 13 | 22,7 | 6,28 |
| May | 30,5 | 7,4 | 18,5 | 100 | 21 | 77 | 1032,3 | 1003,2 | 1019,0 | 149,2 | 11 | 46,4 | 5,68 |
| June | 26,8 | 5,5 | 16,4 | 100 | 32 | 74 | 1037,9 | 1006,2 | 1021,8 | 50,8 | 9 | 43,3 | 7,00 |
| July | 32,5 | 5,2 | 16,4 | 100 | 13 | 76 | 1033,9 | 1010,1 | 1021,9 | 24,1 | 6 | 12,6 | 6,35 |
| Aug. | 25,6 | 5,5 | 16,9 | 100 | 18 | 75 | 1032,9 | 1007,5 | 1020,1 | 19,5 | 8 | 9,5 | 6,38 |
| Sept. | 34,7 | 8,0 | 18,7 | 100 | 16 | 76 | 1031,8 | 1001,3 | 1017,7 | 18,6 | 9 | 11,7 | 6,53 |
| Oct. | 28,3 | 12,8 | 20,4 | 100 | 35 | 78 | 1026,7 | 1003,0 | 1017,5 | 58,4 | 15 | 17,0 | 5,49 |
| Nov. | 29,3 | 13,1 | 21,0 | 100 | 40 | 76 | 1029,6 | 1004,0 | 1017,9 | 64,9 | 15 | 10,1 | 6,25 |
| Dec. | 34,6 | 15,0 | 23,0 | 100 | 44 | 80 | 1026,5 | 1002,2 | 1013,0 | 160,2 | 17 | 34,2 | 4,83 |
| | Total for the year: | | | | | | | | | 876,3 | 144 | - | 6,20 Daily Average for Year |

(b) Geography

Durban is situated on the south eastern seaboard of the African continent, at longitude 31° east and 29° south.

The City is one of the major seaports in the southern hemisphere and the principal one of South Africa, handling over 50 per cent of the total cargo passing through South African ports.

The location of the City coupled with the sub-tropical climate have materially contributed towards making Durban the premier tourist resort of South Africa.

Details of temperature and other meteorological data are set out in the accompanying table.

(c) General Layout

Durban's magnificent seven mile-long sweep of golden beaches extends from the harbour entrance in the south to the Umgeni River mouth in the north. It is in this foreshore area that Durban's internationally known "Golden Mile" is contained, and amenities for the holidaymaker, such as an aquarium, snake park, various amusement parks, swimming baths, hotels, holiday flats, restaurants and the like are in abundance.

The principal commercial area extends due west from the foreshore, and rapid recent development in this area has led to the erection of modern multi-storeyed buildings, many of which overlook the harbour.

Residential areas are located on the Bluff and the Berea, overlooking the harbour, inland and out to sea, and also north of the Umgeni River.

The southern portion of the City is characterised by the presence of major industries, well catered for by convenient road, rail and air services.

(d) Municipal Data

Area: 26 725 hectares

During the year, 32 hectares in the Klaarwater district were incorporated into the Borough. No areas were excised during this period.

| Valuation | Land | Buildings |
|---|---|---|
| Old Borough and added areas (excluding Welbedagt, Buffels Bosch, Newlands and kwa Mashu) | R766 727 820<br>(R757 963 690) | R748 149 140<br>(R706 855 950) |
| Buffels Bosch | R 88 680<br>(R 137 380) | R 17 060<br>(R 17 060) |
| Newlands | R 2 906 870<br>(R 3 116 850) | R 761 860<br>(R 775 130) |
| Welbedagt | R 762 040<br>(R 762 040) | R 169 990<br>(R 169 990) |

Rates: (including water rate - figures quoted are Cents in the Rand)

| | Land | Buildings |
|---|---|---|
| (a) Code 1 (Residential property, dwellings, maisonettes, etc. | 1,73 cents | 1,73 cents |
| (b) Code 2 (Residential property, flats, boarding houses, private hotels, etc. | (1,61 cents) | (1,61 cents) |
| (c) Code 3 (Other than residential property | 3,54 cents<br>(3,24 cents) | 0,59 cents<br>(0,54 cents) |

The rates on land and buildings in the Buffels Bosch and Newlands areas are currently assessed at 40% and 80% respectively of the general rate plus a water rate.

There are no rateable valuations for the kwa Mashu Bantu Housing area, as in terms of Ordinance 5 of 1958, the Council may not levy rates on properties in this area without the prior consent of the Administrator of Natal.

## II. VITAL STATISTICS

Population (Estimated)

| | | |
|---|---|---|
| White | 197 379 | (25,61%) |
| Coloured | 45 505 | ( 5,91%) |
| Bantu | 214 916 | (27,88%) |
| Indian | 312 947 | (40,60%) |
| | 770 747 | (100,00%) |

Following the pattern of previous years, the proportion of Whites continued to show a very slight decrease in relation to the total population. The corresponding increase was shared between the Coloured, Bantu and Indian communities, the Indian group predominating.

1972 Births

| Race | Male | Female | Total | 1971 |
|---|---|---|---|---|
| Legitimate: | | | | |
| White | 1 607 | 1 638 | 3 245 | 3 376 |
| Coloured | 597 | 590 | 1 187 | 1 188 |
| Bantu | 2 116 | 2 069 | 4 185 | 5 538 |
| Indian | 4 515 | 4 447 | 8 962 | 8 799 |
| Total | 8 835 | 8 744 | 17 579 | 18 901 |
| Illegitimate: | | | | |
| White | 73 | 92 | 165 | 212 |
| Coloured | 238 | 249 | 487 | 552 |
| Bantu | 2 713 | 2 841 | 5 554 | 3 938 |
| Indian | 249 | 238 | 487 | 299 |
| Total | 3 273 | 3 420 | 6 693 | 5 001 |
| Total Births: | | | | |
| White | 1 680 | 1 730 | 3 410 | 3 588 |
| Coloured | 835 | 839 | 1 674 | 1 740 |
| Bantu | 4 827 | 4 910 | 9 739 | 9 476 |
| Indian | 4 764 | 4 685 | 9 449 | 9 098 |
| Total | 12 108 | 12 164 | 24 272 | 23 902 |

Crude Birth Rates: (Number of births per 1 000 population)

| | 1972 | 1971 |
|---|---|---|
| White | 17,28 | 18,44 |
| Coloured | 36,79 | 39,45 |
| Bantu | 45,31 | 45,32 |
| Indian | 30,19 | 29,88 |
| All races | 31,49 | 31,78 |

With the exception of the Indian race group, whose birth rate increased by 0,31 births per 1 000 population, the other three communities exhibited a decline in the rates. It is impossible to assess whether the family planning clinics have contributed to this situation to any degree. On the other hand it is remarked that the overall crude birth rate has remained fairly static over the preceding five years, and it would not be an unreasonable assumption to have expected this to have risen over this period; also, the total legitimate births recorded during 1967 are more than the current corresponding figure despite the population increase. However, the annual number of illegitimate births has risen from 3 487 in 1967 to 6 693 in 1972 and this in turn may be a reflection on the permissiveness of society today. None the less the decrease in the overall birth rate is factual.

Illegitimate Births: (As a percentage of total births)

| | 1972 | 1971 |
|---|---|---|
| White | 4,84 | 5,91 |
| Coloured | 29,09 | 31,72 |
| Bantu | 57,03 | 41,56 |
| Indian | 5,15 | 3,29 |
| All races | 27,58 | 20,92 |

The White and Coloured groups show a decline in the rate of illegitimate births. The rates for the Indian and Bantu community, however, have increased, the latter remarkably so.

Stillbirths:

| Community | Number | | Rate per 1 000 live births | |
|---|---|---|---|---|
| | 1972 | 1971 | 1972 | 1971 |
| White | 24 | 23 | 7,09 | 6,45 |
| Coloured | 21 | 40 | 12,70 | 23,53 |
| Bantu | 280 | 238 | 29,60 | 25,76 |
| Indian | 147 | 145 | 15,80 | 16,20 |
| All races | 472 | 446 | 19,83 | 19,01 |

The above show little of significance in comparison with figures for past years.

Deaths:

| Community | Total Deaths | | | | Crude Death rate per 1 000 population | |
|---|---|---|---|---|---|---|
| | Male | Female | Total | 1971 | 1972 | 1971 |
| White | 1 025 | 917 | 1 942 | 1 689 | 9,84 | 8,68 |
| Coloured | 165 | 143 | 308 | 277 | 6,77 | 6,28 |
| Bantu | 1 146 | 904 | 2 050 | 2 180 | 9,54 | 10,43 |
| Indian | 1 160 | 786 | 1 946 | 2 074 | 6,22 | 6,81 |
| All races | 3 496 | 2 750 | 6 246 | 6 220 | 8,10 | 8,27 |

It is of interest that this year the crude death rate for the White community is higher than that of any of the other groups.

The three main causes of death in the different racial communities were as follows:-

| Cause of Death | No. | Percentage of total deaths |
|---|---|---|
| White: | | |
| (a) Diseases of the circulatory system | 898(843) | 46,24 (49,91) |
| (b) Neoplasms | 313(281) | 16,12 (16,64) |
| (c) Diseases of the respiratory system (excluding pulmonary tuberculosis) | 212(205) | 10,92 (12,14) |
| Coloured: | | |
| (a) Diseases of the circulatory system | 69( 74) | 22,40 (26,72) |
| (b) Diseases of the respiratory system (excluding pulmonary tuberculosis) | 41( 38) | 13,31 (13,72) |
| (c) Neoplasms | 27( 31) | 8,77 (11,19) |
| Bantu: | | |
| (a) Diseases of the respiratory system (excluding pulmonary tuberculosis) | 218(257) | 10,63 (11,79) |
| (b) Infective and parasitic diseases | 212(203) | 10,34 ( 9,31) |
| (c) Diseases of the circulatory system | 172(202) | 8,39 ( 9,27) |
| Indian: | | |
| (a) Diseases of the circulatory system | 588(708) | 30,22 (34,14) |
| (b) Diseases of respiratory system (excluding pulmonary tuberculosis) | 239(279) | 12,28 (13,45) |
| (c) Infective and parasitic diseases | 133(161) | 6,84 ( 7,76) |
| All Races: | | |
| (a) Diseases of the circulatory system | 1 727(1 827) | 27,65(29,37) |
| (b) Diseases of the respiratory system (excluding pulmonary tuberculosis) | 710 (779) | 11,37(12,52) |
| (c) Neoplasms | 534 (542) | 8,55( 8,71) |

A statistically disturbing feature is that amongst the Bantu, the apparent main cause of death during 1971 was diseases of the digestive system (267 deaths representing 12,24% of total Bantu deaths) but during 1972 only 86 deaths are recorded because ill-defined conditions accounted for 881 deaths amongst the Bantu. Obviously insufficient detail is being provided on the Death Certificate to permit of accurate statistical analysis.

AGE AT DEATH

The number of deaths at various ages, with the percentage of total deaths, is summarised in the following table:-

1972

| RACE GROUPS | | AGE GROUPS | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 - 1 | | 1 - 4 | | 5 - 13 | | 14 - 23 | | 24 - 43 | | 44 - 63 | | 64 and over | | Total | |
| | | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| DEATHS | White | 54 | 39 | 5 | 4 | 4 | 3 | 22 | 6 | 63 | 32 | 314 | 189 | 563 | 644 | 1 025 | 917 |
| | Coloured | 47 | 37 | 8 | 8 | 8 | 3 | 13 | 4 | 24 | 18 | 32 | 31 | 33 | 42 | 165 | 143 |
| | Bantu | 361 | 371 | 122 | 127 | 14 | 20 | 57 | 32 | 227 | 108 | 274 | 149 | 91 | 97 | 1 146 | 904 |
| | Indian | 275 | 226 | 40 | 41 | 21 | 15 | 47 | 35 | 161 | 71 | 239 | 209 | 277 | 189 | 1 160 | 786 |
| | Total Non-White | 683 | 634 | 170 | 176 | 43 | 38 | 117 | 71 | 412 | 197 | 645 | 389 | 401 | 328 | 2 471 | 1 833 |
| | Total of All Races | 737 | 673 | 175 | 180 | 47 | 41 | 139 | 77 | 475 | 229 | 959 | 578 | 964 | 972 | 3 496 | 2 750 |
| PERCENTAGES | White | 5,27 | 4,25 | 0,49 | 0,44 | 0,39 | 0,33 | 2,15 | 0,65 | 6,14 | 3,49 | 30,63 | 20,61 | 54,93 | 70,23 | 100 | 100 |
| | Coloured | 28,48 | 25,87 | 4,85 | 5,59 | 4,85 | 2,10 | 7,88 | 2,80 | 14,55 | 12,59 | 19,39 | 21,68 | 20,00 | 29,37 | 100 | 100 |
| | Bantu | 31,50 | 41,04 | 10,65 | 14,05 | 1,22 | 2,21 | 4,97 | 3,54 | 19,81 | 11,95 | 23,91 | 16,48 | 7,94 | 10,73 | 100 | 100 |
| | Indian | 23,71 | 28,75 | 3,45 | 5,22 | 1,81 | 1,91 | 4,05 | 4,45 | 13,88 | 9,03 | 29,22 | 26,59 | 23,88 | 24,05 | 100 | 100 |
| | Total Non-White | 27,64 | 34,59 | 6,88 | 9,60 | 1,74 | 2,07 | 4,74 | 3,87 | 16,67 | 10,75 | 26,10 | 21,22 | 16,23 | 17,90 | 100 | 100 |
| | Total of All Races | 21,08 | 24,47 | 5,00 | 6,55 | 1,34 | 1,49 | 3,98 | 2,80 | 13,59 | 8,33 | 27,43 | 21,02 | 27,58 | 35,34 | 100 | 100 |

Amongst the Non-Whites 30,6 per cent (Coloured 27,3; Bantu 35,7; Indians 25,7) of all deaths occurred under the age of one year as compared with 4,8 per cent in the White group.

Deaths under five years of age constituted 5,2 per cent of all deaths in Whites compared with 38,6 per cent in Non-Whites (Coloured 32,5; Bantu 47,8; Indian 29,9).

Deaths under 24 years of age constituted 7,01 per cent of all deaths in Whites compared with 5,09 per cent in the previous year, while amongst Non-Whites 44,89 per cent of all deaths occurred under 24 years of age, an increase from the 41,5 per cent recorded in the previous year.

Deaths from Motor Accidents:

| | 1972 | 1971 |
|---|---|---|
| White | 4 | 13 |
| Coloured | - | 4 |
| Bantu | 25 | 64 |
| Indian | 2 | 51 |
| All Races | 31 | 132 |

Suicides and Self-Inflicted Injury:

| | | |
|---|---|---|
| White | 1 | 16 |
| Coloured | - | - |
| Bantu | 2 | - |
| Indian | - | 21 |
| All Races | 3 | 37 |

Although in both tables above the fall in incidence appears, it is timely to reiterate that without abundant detail being furnished as to the exact cause of death, and surrounding circumstances, comprehensive and useful statistics are difficult to obtain.

Infant Mortality: (Deaths under the age of one year and rate per 1 000 live births)

| Race | No. of Deaths | | Rate | |
|---|---|---|---|---|
| White | 60 | ( 53) | 17,72 | (14,87) |
| Coloured | 64 | ( 55) | 38,72 | (32,35) |
| Bantu | 732 | ( 791) | 77,39 | (85,63) |
| Indian | 326 | ( 372) | 35,05 | (41,55) |
| All Races | 1 182 | (1 271) | 49,66 | (54,19) |

The rates for the White and Coloured community have both risen slightly. It is never the less pleasing to record that although the Bantu rate is still very high in comparison with that of the other groups, for the third consecutive year the figure is below 100, representing a substantial improvement over previous years, viz. 388 in 1955; 246 in 1960; and 117 in 1965.

Maternal Deaths: (Deaths from causes related to childbirth and rate per 1 000 live births)

| Race | No. of Deaths | | Rate | |
|---|---|---|---|---|
| White | 1 | (-) | 0,29 | ( - ) |
| Coloured | 1 | (-) | 0,60 | ( - ) |
| Bantu | 1 | (7) | 0,11 | ( 0,76) |
| Indian | 1 | (7) | 0,11 | ( 0,78) |
| All races | 4 | (14) | 0,17 | ( 0,60) |

The situation is satisfactory.

# III. COMMUNICABLE DISEASES

## INTRODUCTION

There were no cases of formidable epidemic disease during 1972.

## GLOBAL EPIDEMIOLOGY

Continual reference to the World Health Organization Weekly Epidemiological Bulletin is made to keep abreast of the prevalence of diseases in neighbouring states as well as disease trends throughout the world. It is a matter of regret that the State Health Department has not seen fit to re-introduce the epidemiological statistical reports for South Africa which were discontinued in 1970, as these were the only means of obtaining disease incidence rates in our own country.

### (i) Smallpox

One imported case of smallpox from Botswana was reported in South Africa during 1972, compared with seven cases the previous year. The epidemic which started in this neighbouring state reached a peak during July 1972, although no cases were reported during the last eight weeks of the year. The magnitude of the epidemic, occurring after five years of freedom from smallpox, does indicate the need for maintaining the highest possible level of herd immunity by vaccination and for being ever alert for possible importations.

### (ii) Yellow Fever

Cases of yellow fever were reported from Ghana and Zaire during the year. With the high index of Aëdes aegypti mosquitoes in Durban, the areas of occurrence of this disease and possible source of entry into Durban must be constantly remembered.

### (iii) Cholera

This disease progressed as far south as Angola on the West Coast of Africa and on the East Coast increased in Kenya thus the threat of cholera demands increasing vigilance. The emergency measures to be taken in the eventuality of the importation of cholera into this area were agreed to by State, Provincial and Local Authorities. However, the main danger could well lie in the neighbouring rural areas with poor sanitation.

## A. NOTIFIABLE DISEASES

### Notifications

During 1972 there have been fewer notifications of all notifiable diseases except tetanus, meningococcal meningitis and viral hepatitis. In the latter instance, this may be

a true increase or an apparent increase due to more complete reporting.

The following table reflects, in race groups, the number of cases of diseases notified, and the overall attack rate:

| Disease | W | C | B | I | Total | Attack rate per 1 000 population |
|---|---|---|---|---|---|---|
| Diphtheria | - | 2 | 3 | 2 | 7 | 0,0091 |
| Encephalitis | - | - | 4 | 11 | 15 | 0,0195 |
| Erysipelas | 2 | - | - | - | 2 | 0,0026 |
| Gonococcal Ophthalmia | - | - | 1 | - | 1 | 0,0013 |
| Leprosy | 1 | - | 2 | - | 3 | 0,0039 |
| Meningococcal Meningitis | 7 | 1 | 8 | 4 | 20 | 0,0259 |
| Poliomyelitis | - | 2 | 16 | 3 | 21 | 0,0272 |
| Puerperal Sepsis | - | - | 11 | 1 | 12 | 0,0156 |
| Scarlet Fever | 32 | - | - | - | 32 | 0,0415 |
| Tetanus | - | 1 | 9 | 7 | 17 | 0,0221 |
| Typhoid Fever | 2 | 1 | 39 | 6 | 48 | 0,0623 |
| Viral Hepatitis | 70 | 21 | 17 | 111 | 219 | 0,2841 |

Diphtheria

The adjoining table sets out the notifications, deaths and appropriate rates for Durban since 1953. Seven cases were notified in 1972 which is a decrease of four compared with the 1971 figure of 11 cases. Of these seven cases, two were Coloureds, three were Bantu and two were Indians. One death was recorded, an Indian child aged five years. There were no carriers. The immunization state of the cases is depicted below :-

| Details | Seven Cases |
|---|---|
| 3 doses vaccine | 2 |
| 2 doses vaccine | - |
| 1 dose vaccine | 1 |
| No previous immunization | 4 |

The ages of the cases covered a wide range: one was aged 14 months, three were five years, one was 13 years, one 16 years, and the remaining case was 50 years old.

DIPHTHERIA : NOTIFICATIONS AND DEATHS : 1953 TO 1972

(Notification Rate per 1 000 Population : Mortality Rate percentage of Total Notifications)

| Year | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | ALL RACES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Notifications | | Deaths | | Notifications | | Deaths | | Notifications | | Deaths | | Notifications | | Deaths | | Notifications | | Deaths | |
| | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate |
| 1953 | 39 | 0,28 | 2 | 5,13 | 26 | 1,51 | 5 | 19,23 | 76 | 0,51 | 19 | 25,00 | 49 | 0,32 | 11 | 22,45 | 190 | 0,41 | 37 | 19,47 |
| 4 | 25 | 0,17 | 1 | 4,00 | 8 | 0,44 | - | - | 48 | 0,30 | 6 | 12,50 | 19 | 0,12 | - | - | 100 | 0,21 | 7 | 7,00 |
| 5 | 75 | 0,50 | 1 | 1,33 | 34 | 1,82 | 2 | 5,88 | 102 | 0,61 | 16 | 15,69 | 69 | 0,42 | 15 | 21,74 | 280 | 0,56 | 34 | 12,14 |
| 6 | 70 | 0,46 | 5 | 7,14 | 13 | 0,67 | 1 | 7,69 | 43 | 0,24 | 17 | 39,53 | 69 | 0,42 | 12 | 17,39 | 195 | 0,37 | 35 | 17,95 |
| 7 | 38 | 0,25 | 4 | 10,53 | 5 | 0,21 | - | - | 37 | 0,21 | 11 | 29,73 | 31 | 0,16 | 3 | 9,68 | 111 | 0,20 | 18 | 16,21 |
| 8 | 38 | 0,25 | 3 | 7,89 | 6 | 0,24 | - | - | 57 | 0,31 | 13 | 22,81 | 70 | 0,34 | 15 | 21,43 | 171 | 0,30 | 31 | 18,13 |
| 9 | 24 | 0,15 | - | - | 12 | 0,46 | 1 | 8,33 | 55 | 0,29 | 4 | 7,27 | 24 | 0,11 | 5 | 20,83 | 115 | 0,19 | 10 | 8,69 |
| 1960 | 9 | 0,06 | 1 | 11,11 | 7 | 0,28 | - | - | 56 | 0,31 | 6 | 10,71 | 22 | 0,10 | 4 | 18,17 | 94 | 0,16 | 11 | 11,70 |
| 1 | 8 | 0,05 | - | - | 4 | 0,16 | - | - | 63 | 0,34 | 11 | 17,46 | 28 | 0,12 | 3 | 10,71 | 103 | 0,17 | 14 | 13,59 |
| 2 | 10 | 0,06 | 1 | 10,00 | 5 | 0,19 | - | - | 46 | 0,24 | 7 | 15,22 | 9 | 0,04 | 2 | 22,22 | 70 | 0,11 | 10 | 14,29 |
| 3 | 3 | 0,02 | - | - | 6 | 0,22 | 1 | 16,67 | 17 | 0,09 | 1 | 5,88 | 12 | 0,05 | 3 | 25,00 | 38 | 0,06 | 5 | 13,16 |
| 4 | 5 | 0,03 | - | - | 2 | 0,07 | - | - | 15 | 0,08 | 2 | 13,33 | 11 | 0,05 | 5 | 45,45 | 33 | 0,05 | 7 | 21,21 |
| 5 | 1 | 0,006 | - | - | 2 | 0,07 | - | - | 13 | 0,07 | 2 | 15,38 | 3 | 0,01 | - | - | 19 | 0,03 | 2 | 10,53 |
| 6 | 2 | 0,01 | - | - | 1 | 0,03 | 1 | 100,00 | 16 | 0,08 | 3 | 18,75 | 21 | 0,08 | 6 | 28,57 | 40 | 0,06 | 10 | 25,00 |
| 7 | 1 | 0,005 | - | - | 2 | 0,07 | - | - | 18 | 0,09 | 5 | 27,78 | 8 | 0,03 | 2 | 25,00 | 29 | 0,04 | 7 | 24,14 |
| 8 | 1 | 0,005 | - | - | 6 | 0,19 | - | - | 9 | 0,04 | 1 | 11,11 | 14 | 0,05 | 3 | 21,43 | 30 | 0,04 | 4 | 13,33 |
| 9 | - | - | - | - | 1 | 0,03 | - | - | 14 | 0,07 | 4 | 28,57 | 14 | 0,05 | 3 | 21,43 | 29 | 0,04 | 7 | 24,14 |
| 1970 | - | - | - | - | 1 | 0,02 | - | - | 3 | 0,01 | 1 | 33,33 | 1 | 0,003 | 1 | 100,00 | 5 | 0,006 | 2 | 40,00 |
| 1 | - | - | - | - | 4 | 0,09 | - | - | 4 | 0,02 | - | - | 3 | 0,01 | - | - | 11 | 0,01 | - | - |
| 2 | - | - | - | - | 2 | 0,04 | - | - | 3 | 0,01 | - | - | 2 | 0,01 | 1 | 50,00 | 7 | 0,01 | 1 | 14,29 |

Encephalitis

There were 15 notifications during the year, five less than in 1971. The following table sets out the aetiology of these cases and also indicates the racial incidence, whilst deaths are recorded in parenthesis:-

| | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| Virus encephalitis | - | - | 4 (2) | 9 (2) | 13 (4) |
| Measles encephalitis | - | - | - | 1 (1) | 1 (1) |
| Mumps encephalitis | - | - | - | 1 (1) | 1 (1) |
| Total | - | - | 4 (2) | 11 (4) | 15 (6) |

Six deaths were recorded, four due to unspecified virus, one to mumps and the other to measles encephalitis. The two Bantu who died were aged three months and two years and the four Indians were aged 18 months, 4 years, 23 years and 62 years.

Erysipelas

The two notifications during the year were in respect of elderly Whites. There was no connection between the two cases.

Gonococcal Ophthalmia

The single notification during the year was a Bantu aged one week and was notified by the Special Clinic at King Edward VIII Hospital. This figure is five less than during 1971.

Leprosy

The three notifications comprised one White and two Bantu. Two of the cases were 24 years old and the remaining one 55 years, the sex distribution being two male and one female. The White case had been resident in Durban for 10 years whereas the two Bantu cases had lived in Durban for three years and 25 years respectively.

Malaria

Thirty six cases of malaria, all of whom were infected outside the borders of the Republic, were notified during the year. In 30 of these cases Plasmodium falciparum was the responsible parasite and in the remaining six cases Plasmodium vivax was demonstrated. The only death was a White woman aged 20 years.

Meningococcal Meningitis

The 20 cases notified during the year were five more than the 15 notified during 1971. Three deaths occurred, a Bantu aged 18 years, a Coloured aged 6 months and an Indian aged 3 months.

The following table sets out the notifications since 1962, with deaths in parenthesis.

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | 2 (-) | - (-) | 3 (-) | - (-) | 5 (-) |
| 1963 | 2 (-) | - (-) | 1 (1) | 1 (-) | 4 (1) |
| 1964 | 5 (-) | 1 (-) | 3 (1) | 2 (2) | 11 (3) |
| 1965 | 7 (1) | 2 (1) | 16 (2) | 5 (-) | 30 (4) |
| 1966 | 8 (-) | 3 (1) | 11 (1) | 5 (2) | 27 (4) |
| 1967 | 6 (2) | 4 (1) | 20 (3) | 4 (-) | 34 (6) |
| 1968 | 5 (1) | 3 (2) | 15 (3) | 4 (1) | 27 (7) |
| 1969 | 4 (1) | 4 (1) | 17 (1) | 10 (1) | 35 (4) |
| 1970 | 4 (2) | - (-) | 12 (-) | 11 (2) | 27 (4) |
| 1971 | 4 (-) | - (-) | 8 (-) | 3 (1) | 15 (1) |
| 1972 | 7 (-) | 1 (1) | 8 (1) | 4 (1) | 20 (3) |

Poliomyelitis

The 21 notifications received during the year comprised two Coloureds, 16 Bantu and three Indians. This number of notifications is a decrease of 14 compared with 1971. The age range was from four months to three years and together with the immunization state is shown hereunder:-

| Age | Immunization State | | Total |
|---|---|---|---|
| 0 - 11 months | 3 doses | 0 | |
| | 2 doses | 1 | |
| | 1 dose | 3 | |
| | Nil | 3 | 7 |
| 1 year to 1 year 11 months | 3 doses | 1 | |
| | 2 doses | 2 | |
| | 1 dose | 1 | |
| | Nil | 5 | 9 |
| 2 years to 2 years 11 months | 3 doses | 2 | |
| | 2 doses | 1 | |
| | 1 dose | 0 | |
| | Nil | 0 | 3 |
| 3 years and over | 3 doses | 1 | |
| | 2 doses | 0 | |
| | 1 dose | 1 | |
| | Nil | 0 | 2 |

No deaths were recorded during the year.

For quick reference the notifications in racial groups since 1962 are given :-

| Year | White | Col-oured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | - | - | 4 | - | 4 |
| 1963 | 1 | - | 20 | 5 | 26 |
| 1964 | - | - | 7 | 1 | 8 |
| 1965 | - | - | 9 | - | 9 |
| 1966 | 1 | - | 12 | 6 | 19 |
| 1967 | - | - | - | - | - |
| 1968 | - | 3 | 10 | - | 13 |
| 1969 | 1 | 2 | 17 | 2 | 22 |
| 1970 | - | - | 2 | 1 | 3 |
| 1971 | - | - | 33 | 2 | 35 |
| 1972 | - | 2 | 16 | 3 | 21 |

Puerperal Sepsis

The 12 notifications received were four less than in 1971 and comprised 11 Bantu and one Indian. Nine of the cases gave birth to their babies in local hospitals.

Scarlet Fever

There were 32 notifications of this disease during the year, a decrease of one compared with the previous year. All 32 cases were White.

Eight cases were admitted to hospital whilst the remainder were nursed at home, where conditions were acceptable to this Department for home isolation and nursing.

Tetanus

The following table sets out the ages and racial incidence of the 17 tetanus notifications which occurred during the year. Five of the cases were in respect of tetanus neonatorum. Twelve deaths were recorded and these are included in parenthesis in the subjoined table. Once again attention is drawn to the very high mortality rate of the disease, 70% of the cases having died.

| Ages | White | Col-oured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 0 - 31 days | - | - | 3 (3) | 2 (1) | 5 (4) |
| 1 month - 5 months | - | - | - | - | - |
| 6 months - 11 months | - | - | - | - | - |
| 1 year - 4 years | - | - | - | - | - |
| 5 years - 9 years | - | - | - | - | - |
| 10 years - 19 years | - | - | - | - | - |
| 20 years - 29 years | - | 1 (1) | 2 | - | 3 (1) |
| 30 years - 39 years | - | - | - | 3 (3) | 3 (3) |
| 40 years and over | - | - | 4 (2) | 2 (2) | 6 (4) |
| Total | - | 1 (1) | 9 (5) | 7 (6) | 17(12) |

The table below sets out the notifications of tetanus since the disease became notifiable in December 1964, the deaths being recorded in parenthesis :-

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1965 | - | 4 (2) | 15 ( 5) | 9 (1) | 28 ( 8) |
| 1966 | - | - (-) | 22 (14) | 9 (4) | 31 (18) |
| 1967 | - | - (-) | 24 (12) | 3 (2) | 27 (14) |
| 1968 | - | - (-) | 9 ( 4) | 8 (6) | 17 (10) |
| 1969 | - | 1 (1) | 17 ( 5) | 10 (5) | 28 (11) |
| 1970 | - | - (-) | 12 ( 8) | 10 (4) | 22 (12) |
| 1971 | - | - (-) | 6 ( 3) | 5 (4) | 11 ( 7) |
| 1972 | - | 1 (1) | 9 ( 5) | 7 (6) | 17 (12) |

A review of reported cases of tetanus (excluding tetanus neonatorum) during the last three years showed that 31 cases were notified, of whom 17 died.

| Sex Distribution | Males | Females | Total |
|---|---|---|---|
| Cases | 20 | 11 | 31 |
| Deaths | 7 | 10 | 17 |

A major contribution to the high death rate amongst females followed septic abortions where six out of seven women died. Of the remainder, three received injuries to their feet and the other had extensive burns.

Site of Injury

| | Feet | Head | Hand | Birth Canal | Other |
|---|---|---|---|---|---|
| Cases | 14 | 6 | 1 | 7 | 3 |
| Deaths | 8 | 1 | - | 6 | 2 |

The injuries to the feet in four instances were due to youths treading on broken glass. A further four followed, the victims treading on nails or pieces of iron (in one case on a building site) and three as a result of gardening activities. The six head injuries were sustained in brawls or as a result of an assault.

Occupation:

| | Labourers | Scholars | Housewives | Farmers | Unknown |
|---|---|---|---|---|---|
| Cases | 9 | 6 | 10 | 1 | 5 |
| Deaths | 3 | 2 | 9 | 1 | 2 |

Typhoid Fever

Forty eight cases of typhoid fever were notified during the year, comprising two Whites, one Coloured, 39 Bantu and six Indians. This is a decrease of 16 cases compared with 1971 when there were 64 cases. Four deaths were recorded, all Bantu.

Two carriers were discovered during the year, one White and one Bantu. They are being stool and urine tested at regular intervals.

Two of the Bantu cases were from the same home. The one case was discovered as a "carrier" and had passed the infection on to her granddaughter. Another two cases were employees of the same establishment. Being friends they shared their meals and the one, having contracted the disease it was accepted as reasonable that he had passed the infection on to the other. A further two cases were connected in that they were employees in the same household.

In every case of typhoid fever notified, stool and urine tests were carried out to discover the source of the infection, as well as intensive investigations into the diet, travel, swimming and other relevant habits of the cases.

The highest incidence of the disease occurred in the month of February when 11 cases were notified.

The following table shows the age groups involved:-

| Years | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-30 | 30-39 | 40-49 | 50+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Cases | 3 | 6 | 9 | 9 | 8 | 4 | 3 | 1 | 5 | 48 |

Twenty one of the cases of typhoid fever occurred in kwa-Mashu, four in Lamontville, one each in Umlazi Glebelands and Chatsworth.

The adjoining table sets out the notifications, deaths and appropriate rates for Durban since 1953. Since 1966 these statistics refer only to cases where Salmonella typhi was the causative agent.

Viral Hepatitis

Two hundred and nineteen notifications were received of which 70 were Whites, 21 Coloured, 17 Bantu and 111 Indians. This represents an increase of 67 over the 1971 figure. Six deaths were recorded, namely, one White, one Coloured and four Bantu. One hundred and twenty five of the notifications were in respect of hospitalised cases, almost all the non-white notifications stemming from this source.

Two of the cases had received blood transfusions prior to the onset of the illness.

TYPHOID : NOTIFICATIONS AND DEATHS : 1953 TO 1972

(Notification Rate per 1 000 Population : Mortality Rate percentage of Total Notifications)

| Year | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | ALL RACES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Notifications | | Deaths | | Notifications | | Deaths | | Notifications | | Deaths | | Notifications | | Deaths | | Notifications | | Deaths | |
| | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate |
| 1953 | 4 | 0,03 | - | - | - | - | - | - | 53 | 0,36 | 11 | 20,75 | 16 | 0,10 | - | - | 73 | 0,16 | 11 | 15,07 |
| 4 | 5 | 0,04 | - | - | 4 | 0,22 | - | - | 74 | 0,48 | 9 | 12,16 | 9 | 0,06 | 2 | 22,22 | 92 | 0,19 | 11 | 11,96 |
| 5 | 8 | 0,05 | - | - | 3 | 0,16 | - | - | 73 | 0,44 | 4 | 5,48 | 16 | 0,10 | - | - | 100 | 0,20 | 4 | 4,00 |
| 6 | 3 | 0,03 | - | - | 1 | 0,05 | - | - | 52 | 0,30 | 3 | 5,77 | 9 | 0,05 | - | - | 67 | 0,13 | 3 | 4,48 |
| 7 | 6 | 0,04 | 1 | 16,66 | 1 | 0,04 | - | - | 110 | 0,61 | 6 | 5,45 | 5 | 0,03 | 1 | 20,00 | 122 | 0,22 | 8 | 6,56 |
| 8 | 7 | 0,04 | - | - | 5 | 0,19 | - | - | 246 | 1,32 | 22 | 8,13 | 20 | 0,09 | 2 | 5,00 | 278 | 0,49 | 24 | 8,63 |
| 9 | 6 | 0,04 | - | - | 1 | 0,04 | 1 | 100,00 | 280 | 1,45 | 21 | 7,50 | 16 | 0,07 | 2 | 12,49 | 303 | 0,51 | 24 | 7,92 |
| 1960 | 8 | 0,05 | 1 | 12,50 | 4 | 0,16 | - | - | 71 | 0,39 | 3 | 4,22 | 7 | 0,03 | - | - | 90 | 0,16 | 4 | 4,44 |
| 1 | 2 | 0,01 | - | - | 2 | 0,08 | - | - | 39 | 0,21 | 2 | 5,13 | 16 | 0,07 | 1 | 6,25 | 59 | 0,10 | 3 | 5,08 |
| 2 | 5 | 0,03 | - | - | - | - | - | - | 25 | 0,13 | - | - | 11 | 0,05 | - | - | 41 | 0,07 | - | - |
| 3 | 1 | 0,01 | - | - | 3 | 0,11 | - | - | 25 | 0,13 | 1 | 4,00 | 6 | 0,03 | - | - | 35 | 0,06 | 1 | 2,86 |
| 4 | 2 | 0,01 | - | - | 1 | 0,04 | - | - | 30 | 0,15 | 3 | 10,00 | 10 | 0,04 | - | - | 43 | 0,07 | 3 | 6,98 |
| 5 | 5 | 0,03 | - | - | 1 | 0,03 | - | - | 23 | 0,12 | - | - | 10 | 0,04 | - | - | 39 | 0,06 | - | - |
| 6 | - | - | - | - | 3 | 0,10 | - | - | 37 | 0,18 | 3 | 8,11 | 12 | 0,05 | - | - | 52 | 0,08 | 3 | 5,77 |
| 7 | 2 | 0,01 | - | - | 2 | 0,07 | - | - | 23 | 0,11 | 1 | 4,35 | 10 | 0,04 | - | - | 37 | 0,05 | 1 | 2,70 |
| 8 | 4 | 0,02 | - | - | - | - | - | - | 20 | 0,10 | 3 | 15,00 | 19 | 0,07 | - | - | 43 | 0,06 | 3 | 6,98 |
| 9 | 6 | 0,03 | - | - | 5 | 0,15 | - | - | 24 | 0,11 | 8 | 33,33 | 9 | 0,03 | - | - | 44 | 0,06 | 8 | 18,18 |
| 1970 | 2 | 0,01 | - | - | - | - | - | - | 30 | 0,15 | 3 | 10,00 | 5 | 0,02 | - | - | 37 | 0,05 | 3 | 8,11 |
| 1 | 16 | 0,08 | 1 | 6,25 | 3 | 0,07 | 1 | 33,33 | 31 | 0,15 | 5 | 16,13 | 14 | 0,05 | - | - | 64 | 0,08 | 7 | 10,94 |
| 2 | 2 | 0,01 | - | - | 1 | 0,02 | - | - | 39 | 0,18 | 4 | 10,26 | 6 | 0,02 | - | - | 48 | 0,06 | 4 | 8,33 |

## B. OTHER INFECTIOUS DISEASES

The only statistics available to indicate the prevalence of non-notifiable diseases are obtained from two sources:-

(i) Admissions of cases to hospital for isolation and treatment; and

(ii) monthly returns by school principals.

Table I : Admissions of Cases to Hospitals

| Disease | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| Chickenpox | 10 | 2 | 34 | 2 | 48 |
| Measles | 21 | 24 | 241 | 41 | 327 |
| Mumps | 8 | 1 | 5 | 1 | 15 |
| Rubella | 1 | - | - | - | 1 |
| Whooping Cough | 10 | - | 13 | 1 | 24 |

Table II : School Notifications (White, Coloured and Indian only)

| Month | Chicken-pox | Measles | Mumps | Rubella | Whooping Cough |
|---|---|---|---|---|---|
| Jan. | 5 | 27 | 16 | 2 | 6 |
| Feb. | 16 | 101 | 96 | 6 | 7 |
| Mar. | 11 | 125 | 177 | 13 | 3 |
| Apr. | 5 | 119 | 211 | 16 | 14 |
| May | 49 | 182 | 312 | 25 | 18 |
| June | 24 | 233 | 402 | 5 | 7 |
| July | 22 | 158 | 315 | 8 | 9 |
| Aug. | 27 | 224 | 491 | 36 | 21 |
| Sept. | 85 | 213 | 318 | 18 | 4 |
| Oct. | 75 | 335 | 422 | 8 | 11 |
| Nov. | 57 | 182 | 287 | 26 | 5 |
| Dec. | 1 | 17 | 12 | - | - |
| Total | 377 | 1 916 | 3 059 | 163 | 105 |

# IV. TUBERCULOSIS

## INTRODUCTION

The following figures represent the number of known current cases of pulmonary tuberculosis in Durban as at the end of the year 1972:-

| Race | City Cases | Ex-City Cases |
|---|---|---|
| White | 664 | 119 |
| Coloured | 781 | 109 |
| Bantu | 10 242 | 3 958 |
| Indian | 4 138 | 305 |
| Total | 15 825 | 4 491 |
| Grand Total | 20 316 | |

Closed case files are not included in this table.

The ex-City group comprises :-

(i) cases living outside the Durban Municipal area but working and receiving treatment in Durban;

(ii) country cases (particularly Bantu) who have come to Durban because of their illness and are then found to be suffering from pulmonary tuberculosis whilst sojourning in this City;

(iii) known pulmonary tuberculosis cases who are either visiting relatives or have permanently moved to Durban.

With effect from 1 April, 1971, the Public Health Act was amended and Section 50(5) dealing with domicile was deleted; net costs of pulmonary tuberculosis services thus became 100% refundable by the State to local authorities. This meant that the six-month period of domicile in this City required before a case was accepted financially as a City responsibility, fell away. Nevertheless this Department continues to assess cases as City and ex-City as in the past, both for epidemiological purposes and to maintain a uniform base line for statistical comparison in the future.

The total number of City cases is 0,1% lower and ex-City cases 13% higher than last year.

## STATISTICS OF CITY CASES

### (a) Pulmonary Tuberculosis

#### (i) Notifications

The number of notifications of pulmonary tuberculosis received during 1972 is set out in the following table, together with the figures for the previous 10 years:-

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | 129 | 85 | 1 524 | 332 | 2 070 |
| 1963 | 121 | 77 | 1 355 | 316 | 1 869 |
| 1964 | 121 | 110 | 1 256 | 479 | 1 966 |
| 1965 | 100 | 98 | 1 336 | 532 | 2 066 |
| 1966 | 102 | 105 | 1 656 | 549 | 2 412 |
| 1967 | 133 | 149 | 1 566 | 575 | 2 423 |
| 1968 | 79 | 103 | 1 262 | 495 | 1 939 |
| 1969 | 81 | 100 | 1 234 | 469 | 1 884 |
| 1970 | 95 | 124 | 1 099 | 459 | 1 777 |
| 1971 | 87 | 99 | 1 067 | 445 | 1 698 |
| 1972 | 75 | 120 | 941 | 375 | 1 511 |

In addition to the notifications set out above, a further 34 City notifications were recorded in respect of old cases, not previously notified to this Department. These cases came to light following the transfer of the Durban Chest Clinic from the State Health Department to this local authority. The racial breakdown of these old cases is as follows:-

| White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|
| 3 | 1 | 26 | 4 | 34 |

These notifications have not been included in the 1972 figures to avoid statistical distortion as they rightly belong under those previous years when the diagnosis was in fact made. Retrospective correction in turn would require much work and the altering of many previous years' statistics without providing any new conclusions. In comparing statistics from the year 1971 onwards, it must be remembered therefore that the notifications and attack rates for years prior to 1971 could in fact have been slightly higher than recorded.

The corresponding attack rates per 1 000 population, excluding the 34 notifications mentioned above, are shown in the following table:-

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | 0,76 | 3,21 | 8,03 | 1,44 | 3,35 |
| 1963 | 0,70 | 2,82 | 7,04 | 1,33 | 2,97 |
| 1964 | 0,69 | 3,91 | 6,43 | 1,96 | 3,06 |
| 1965 | 0,56 | 3,03 | 6,74 | 2,12 | 3,14 |
| 1966 | 0,56 | 3,52 | 8,23 | 2,14 | 3,60 |
| 1967 | 0,76 | 4,85 | 7,68 | 2,18 | 3,55 |
| 1968 | 0,42 | 3,27 | 6,11 | 1,83 | 2,78 |
| 1969 | 0,42 | 3,09 | 5,89 | 1,69 | 2,66 |
| 1970 | 0,49 | 2,91 | 5,48 | 1,58 | 2,45 |
| 1971 | 0,44 | 2,24 | 5,10 | 1,46 | 2,25 |
| 1972 | 0,38 | 2,64 | 4,38 | 1,20 | 1,96 |

The age group distribution, including the 34 mentioned above, notified during 1972 was :-

| Ages | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 0 - 4 years | 2 | 26 | 123 | 52 | 203 |
| 5 - 14 years | 3 | 17 | 60 | 36 | 116 |
| 15 - 24 years | 4 | 15 | 139 | 99 | 257 |
| 25 - 44 years | 20 | 34 | 410 | 121 | 585 |
| 45 - 64 years | 34 | 21 | 219 | 58 | 332 |
| 65 years and over | 15 | 8 | 16 | 13 | 52 |
| Total | 78 | 121 | 967 | 379 | 1 545 |

Source of Notifications

Of the 1 511 new pulmonary tuberculosis cases notified, the sources of notifications were :-

| | |
|---|---|
| Tuberculosis clinics ..... | 1 049 |
| Hospitals ..... | 445 |
| Private Institutions ..... | 17 |

Comment

Of the 1 511 notifications, 14 were in respect of children 0 - 4 years old with a positive Tuberculin test and no evidence of pulmonary tuberculosis radiologically, or a history of having received BCG immunization.

The downward trend of notifications in respect of new active cases of pulmonary tuberculosis since 1967 continued during 1972, with the total being 11,01% lower than the previous year's figure of 1 698. The actual number of notifications and the incidence rate was, in each race group, lower than the previous year.

The varied reasons for this downward trend in the incidence of pulmonary tuberculosis were set out fully in my Annual Report for 1969 but basically amount to an improved standard of living and this Department's intensive clinic and field programmes.

(ii) Deaths

Deaths of City cases, corrected for inward and outward transfers are set out below, together with the figures since 1962:-

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | 14 | 15 | 133 | 37 | 199 |
| 1963 | 14 | 6 | 129 | 22 | 171 |
| 1964 | 9 | 8 | 108 | 23 | 148 |
| 1965 | 15 | 13 | 120 | 30 | 178 |
| 1966 | 11 | 10 | 57 | 19 | 97 |
| 1967 | 9 | 7 | 82 | 24 | 122 |
| 1968 | 7 | 10 | 73 | 16 | 106 |
| 1969 | 6 | 3 | 50 | 21 | 80 |
| 1970 | 7 | 5 | 65 | 19 | 96 |
| 1971 | 3 | 8 | 54 | 14 | 79 |
| 1972 | 4 | 1 | 57 | 18 | 80 |

The corresponding death rates per 1 000 population were:-

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | 0,08 | 0,57 | 0,70 | 0,16 | 0,32 |
| 1963 | 0,08 | 0,22 | 0,67 | 0,09 | 0,27 |
| 1964 | 0,05 | 0,28 | 0,55 | 0,09 | 0,23 |
| 1965 | 0,08 | 0,44 | 0,60 | 0,11 | 0,27 |
| 1966 | 0,06 | 0,33 | 0,28 | 0,07 | 0,14 |
| 1967 | 0,05 | 0,23 | 0,40 | 0,09 | 0,18 |
| 1968 | 0,04 | 0,32 | 0,35 | 0,06 | 0,15 |
| 1969 | 0,03 | 0,09 | 0,24 | 0,08 | 0,11 |
| 1970 | 0,04 | 0,11 | 0,32 | 0,06 | 0,13 |
| 1971 | 0,01 | 0,18 | 0,25 | 0,04 | 0,10 |
| 1972 | 0,02 | 0,02 | 0,27 | 0,06 | 0,10 |

(b) Non-Pulmonary Tuberculosis

(i) Notifications

The total notifications of non-pulmonary

tuberculosis since 1962 are set out below:-

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | 14 | 5 | 56 | 33 | 108 |
| 1963 | 2 | - | 50 | 30 | 82 |
| 1964 | 6 | 1 | 50 | 44 | 101 |
| 1965 | 2 | 2 | 50 | 48 | 100 |
| 1966 | 2 | - | 46 | 37 | 85 |
| 1967 | - | - | 29 | 31 | 60 |
| 1968 | 1 | - | 45 | 37 | 83 |
| 1969 | - | 1 | 35 | 41 | 77 |
| 1970 | 1 | 1 | 31 | 23 | 56 |
| 1971 | 2 | 5 | 41 | 27 | 75 |
| 1972 | 2 | 2 | 42 | 27 | 73 |

These 73 notifications for 1972 are analysed according to age groups as follows:-

| Ages | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 0 - 4 yrs. | - | 1 | 3 | 1 | 5 |
| 5 -14 yrs. | 1 | - | 5 | 3 | 9 |
| 15 -24 yrs. | - | - | 4 | 9 | 13 |
| 25 -44 yrs. | - | 1 | 13 | 9 | 23 |
| 45 -64 yrs. | 1 | - | 14 | 5 | 20 |
| 65 years and over | - | - | 3 | - | 3 |
| Total | 2 | 2 | 42 | 27 | 73 |

Comment

A further 40 cases were notified as suffering from pulmonary tuberculosis in addition to other existing tuberculosis lesions. Of the total of 113 infections of non-pulmonary tuberculosis, the commonest conditions were:-

| | |
|---|---|
| Tuberculous meningitis ..... | 35 |
| Tuberculous lymphadenitis ... | 28 |
| Tuberculosis of bones and joints ..... | 22 |
| Tuberculous peritonitis ..... | 8 |
| Tuberculous pericarditis .... | 8 |

(ii) Deaths

The number of deaths from non-pulmonary tuberculosis since 1962, corrected for inward and outward transfers, is reflected hereunder :-

| Year | White | Ccloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | - | 3 | 36 | 11 | 50 |
| 1963 | 1 | - | 19 | 10 | 30 |
| 1964 | 1 | - | 28 | 12 | 41 |
| 1965 | 1 | 1 | 21 | 5 | 28 |
| 1966 | 1 | 5 | 29 | 5 | 40 |
| 1967 | 1 | 1 | 29 | 9 | 40 |
| 1968 | - | 2 | 17 | 5 | 24 |
| 1969 | - | 2 | 12 | 7 | 21 |
| 1970 | - | - | 4 | 2 | 6 |
| 1971 | - | 2 | 5 | 6 | 13 |
| 1972 | 1 | - | 3 | 1 | 5 |

The corresponding death rates, per 1 000 population are as follows -

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | - | 0,113 | 0,190 | 0,048 | 0,081 |
| 1963 | 0,006 | - | 0,099 | 0,042 | 0,048 |
| 1964 | 0,006 | - | 0,143 | 0,049 | 0,064 |
| 1965 | 0,005 | 0,034 | 0,105 | 0,019 | 0,042 |
| 1966 | 0,006 | 0,167 | 0,144 | 0,019 | 0,059 |
| 1967 | 0,005 | 0,033 | 0,142 | 0,034 | 0,059 |
| 1968 | - | 0,063 | 0,082 | 0,019 | 0,034 |
| 1969 | - | 0,062 | 0,056 | 0,025 | 0,030 |
| 1970 | - | - | 0,020 | 0,007 | 0,008 |
| 1971 | - | 0,045 | 0,024 | 0,020 | 0,017 |
| 1972 | 0,005 | - | 0,014 | 0,003 | 0,007 |

Hospital Admissions

During 1972 a total of 1 225 City cases were admitted to various hospitals and comprised 71 Whites, 76 Coloureds, 830 Bantu and 248 Indians. This represents a slight increase over the 1 148 cases admitted during 1971. Discharges of City cases totalled 870, made up of 35 Whites, 48 Coloureds, 584 Bantu and 203 Indians. Ninety five patients either absconded or left hospital against medical advice, which is lower than the 110 patients falling into this category in 1971. All these cases were immediately followed up by the field staff of this Department to ensure continuation of treatment at clinic or re-hospitalisation where essential.

King George V Hospital

This large State-controlled hospital is situated within the Borough of Durban so it is appropriate to include the following statistics for the year 1972 which were kindly supplied by the Medical Superintendent:

| King George V Hospital | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| Admissions | 170 | 130 | 2 682 | 338 | 3 320 |
| Discharges, including deaths, abscondments, etc.) | 194 | 124 | 2 668 | 361 | 3 337 |
| Deaths | 22 | 10 | 231 | 28 | 291 |

| Year | Irregular discharges as a percentage of all discharges | Pulmonary tuberculosis "relapse" rate (ratio of re-admissions to total admissions) |
|---|---|---|
| 1962 | 12,5% | 16,8% |
| 1963 | 13,0% | 16,2% |
| 1964 | 11,0% | 17,0% |
| 1965 | 8,1% | 17,3% |
| 1966 | 8,7% | 16,0% |
| 1967 | 7,0% | 9,5% |
| 1968 | 4,7% | 10,9% |
| 1969 | 5,8% | 8,9% |
| 1970 | 5,2% | 8,7% |
| 1971 | 6,4% | 8,8% |
| 1972 | 6,2% | 9,0% |

OUTPATIENT SERVICES

No new Municipal clinics were established during the year. Throughout 1972 all clinics functioned satisfactorily. At the peripheral Non-White township clinics, X-Ray facilities are provided by two mobile 100 mm X-Ray machines. The time-tables of the various clinics operating within this City are set out hereunder:-

| Clinic | Race | Day |
|---|---|---|
| Durban Chest Clinic | All races | Monday to Friday |
| kwaMashu | Bantu | Monday to Friday |
| Merebank | Indian | Fridays only |
| Chatsworth-Bayview | Indian | Tuesdays only |
| Chatsworth - Township Centre | Indian | Mondays & Thursdays |
| Lamontville | Bantu | Wednesdays only |

On the whole the work throughput was slightly less than in the previous year with only the Lamontville and Chatsworth clinics showing a slight increase.

Clinic Statistics

The following statistics reflect the work performed at this Department's pulmonary tuberculosis outpatient clinics in the course of 1972 :-

| Details | Durban Chest Clinic | kwa-Mashu | Mere-bank | Chatsworth | | Lamont ville | Total |
|---|---|---|---|---|---|---|---|
| | | | | Town-ship Centre | Bay View | | |
| Sessions | 251 | 249 | 51 | 94 | 50 | 51 | 746 |
| Attendances | 106 432 | 30 769 | 4 542 | 15 585 | 5 447 | 8 744 | 171 519 |
| Streptomycin Injections | 10 159 | 3 416 | 140 | 274 | 169 | 1 029 | 15 187 |
| Tuberculin Tests | 4 100 | 2 382 | 909 | 4 232 | 684 | 1 390 | 13 697 |
| BCG Vaccina-tions | 1 456 | 1 624 | 506 | 2 040 | 280 | 398 | 6 304 |
| X-Rays | 115 128 | 5 719 | 692 | 2 403 | 1 647 | 2 011 | 127 600 |
| Suspects Seen | 9 748 | 3 422 | 1 101 | 4 591 | 917 | 1 332 | 21 111 |
| Contacts Seen | 5 741 | 2 000 | 180 | 579 | 396 | 814 | 9 710 |

During the year the following numbers of suspects and contacts were admitted to these clinics for the first time :-

| Durban Chest Clinic | kwa-Mashu | Mere-bank | Chatsworth | | Lamont-ville | Total |
|---|---|---|---|---|---|---|
| | | | Town-ship Centre | Bay View | | |
| 15 489 | 5 422 | 1 281 | 5 170 | 1 313 | 2 146 | 30 821 |

Investigations of these persons yielded the following cases of pulmonary tuberculosis :-

| Details | Durban Chest Clinic | kwa-Mashu | Mere-bank | Chatsworth | | Lamont-ville | Total |
|---|---|---|---|---|---|---|---|
| | | | | Town-ship Centre | Bay View | | |
| Pulmonary Tuberculosis | 829 | 289 | 13 | 33 | 2 | 58 | 1 224 |
| Pulmonary Tuberculosis cases as a % of clinic admissions | 4,7% | 5,3% | 1,0% | 0,6% | 0,15% | 2,7% | 3,97% |

At the Durban Chest Clinic, influx control and pre-employment X-Rays continued to be undertaken in addition to the suspects and contacts mentioned above. The yield of pulmonary tuberculosis cases from these is tabulated hereunder :-

| Race | Influx Control (Bantu) | | Pre-employment (all races) | |
|---|---|---|---|---|
| | Total X-Rayed | Pulmonary Tuberculosis cases as % of total X-Rayed | Total X-Rayed | Pulmonary tuberculosis cases as % of total X-Rayed |
| White | - | - | 3 057 | Nil |
| Coloured | - | - | 1 319 | 0,07% |
| Bantu | 22 227 | 0,27% | 12 345 | 0,36% |
| Indian | - | - | 10 709 | 0,1% |

Tuberculin testing precedes BCG vaccination at all this Department's clinics and in school programmes, except in the case of newborns who have not been immunized with BCG before.

The following table analyses the tuberculin tests performed at the various clinics during the year :-

| Tuberculin Tests | Durban Chest Clinic | kwa-Mashu | Merebank | Chatsworth | | Lamontville |
|---|---|---|---|---|---|---|
| | | | | Township Centre | Bay View | |
| Tests done | 4 100 | 2 382 | 901 | 4 660 | 652 | 1 338 |
| Tests read | 2 642 | 2 131 | 823 | 3 371 | 367 | 864 |
| % Read | 64,4% | 89% | 91,3% | 72,3% | 56,3% | 63,9% |
| Positive | 832 | 1 357 | 351 | 1 283 | 146 | 404 |
| Negative | 1 810 | 774 | 472 | 2 088 | 221 | 460 |
| % Positive of tests read | 31,5% | 63,7% | 42,8% | 38,1% | 39,8% | 53,2% |

BCG ADMINISTRATION AND SCHOOLS PROGRAMME

Following previous years BCG vaccine was administered to the following major groups :-

(i) newborns delivered at King Edward VIII Hospital, McCord Zulu Hospital, St. Aidan's Mission Hospital, Shifa Hospital, and Coloured babies born at Addington Hospital;

(ii) tuberculin negative reactors attending the tuberculosis clinics;

(iii) tuberculin negative reactors discovered during routine testing of Non-White schoolchildren.

At the beginning of each year in accord with past years the routine school programme is commenced and Indian, Bantu and Coloured schools are visited. Class I, Standard 6 and Standard 10 pupils at Bantu schools, and Class I and Standard 8 pupils at Indian and Coloured schools are tuberculin tested and negative reactors given BCG vaccine. Where tuberculin tests are strongly positive the scholars as well as their family contacts are investigated for pulmonary tuberculosis.

The number of BCG vaccinations administered in the City during 1972 was made up as follows:-

| | |
|---|---|
| Newborns at King Edward VIII Hospital | 14 147 |
| Newborns at McCords Zulu Hospital | 2 365 |
| Newborns at St. Aidan's Mission Hospital | 3 817 |
| Newborns at Shifa Hospital | 914 |
| Municipal Tuberculosis clinics | 6 304 |
| Non-White School Programme | 13 241 |
| Total | 40 788 |

Because the proportion of cases occurring in the economically active age groups is increasing in relation to the total number of new cases each year, and also because the majority of children who previously had BCG vaccine received it as newborns, children with Heaf Grade I and II will, during 1973 also receive BCG vaccine. The indications are that there are so few children in the first year of school with Grades III and IV that the 'following' year pre-testing can be dispensed with and BCG given to all pupils in their first year at school. An analysis of the tests carried out in 1973 and in particular the number of new cases found in various age groups as a result of further investigation of children with Grade III or IV reactions, will show whether prior testing with tuberculin needs to be continued in the older children.

A survey of infants who had been vaccinated 16 to 20 weeks previously as newborn, indicated that only 43% had converted to a positive reaction. Investigation revealed that the technique was faulty in some instances and a follow-up where the vaccine was correctly administered resulted in a 75% conversion. A similar survey will be repeated in 1973 when the technique will be closely supervised and a different vaccine used.

FIELD WORK AND CONTROL PROGRAMMES

The staff, as at the end of the year, responsible for tuberculosis field work comprised four White health visitors, one White health inspector, 17 Bantu and 8 Indian health assistants. They are responsible for investigating all new notifications of pulmonary tuberculosis, referring contacts and suspects to clinics, maintaining contacts and health educating pulmonary tuberculosis cases and their families, tracing defaulters both from hospital and clinic, and initiating food parcels in terms of the State Health Supplementary Feeding Scheme for Indigent Tuberculosis Cases as well as other financial help from the appropriate welfare organisation and authorities.

Field visits during the year totalled 51 500 (85 588 in 1971 and 69 489 in 1970) and were made up of 3 795 visits to Whites, 3 591 to Coloureds, 27 021 to Bantu and 17 093 to Indians.

This total is approximately 39,8% lower than for last year and 22,2% lower than 1970. Although there has been no change in staff during the year this meant that more much needed time was available for each case.

MOBILE MASS X-RAY FOR COMMERCE AND INDUSTRY

The State Health Department continued to operate the 70 millimetre mobile mass X-Ray units which also provide a screening service for commerce and industry at a fee of 30 c per head. During the year 33 381 such X-Rays were carried out in Durban.

SUPPLEMENTARY FEEDING OF INDIGENT TUBERCULOSIS CASES

A sum of R9 000 was again available during the year for the purchase of foodstuffs to supplement the diet of indigent pulmonary tuberculosis patients.

During the year 7 373 rations were distributed compared to 6 481 in 1971 and 7 295 in 1970. Due to the shorter periods which patients required rations, many more persons received rations than during previous years, viz. in 1972, 714 patients obtained rations compared to 659 in 1971 and 234 in 1970.

The following table reflects the number of patients on rations, as well as the rations given them during the year:-

| Age Group: Years | White | | Coloured | | Bantu | | Indian | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Patients | Rations | Patients | Rations | Patients | Rations | Patients | Rations | Patients | Rations |
| 0- 4 yrs. | - | - | 8 | 93 | 44 | 413 | 69 | 746 | 121 | 1252 |
| 5- 8 yrs. | - | - | 13 | 138 | 44 | 521 | 29 | 271 | 86 | 930 |
| 9-12 yrs. | - | - | - | - | 10 | 112 | 11 | 97 | 21 | 209 |
| 13 years and over | 6 | 21 | 51 | 621 | 283 | 2739 | 146 | 1601 | 486 | 4982 |
| Total | 6 | 21 | 72 | 852 | 381 | 3785 | 255 | 2715 | 714 | 7373 |

DOMICILIARY ASSISTANCE

The Natal Anti-Tuberculosis Association continued its good work in rendering assistance in cash or kind to the dependents of tuberculosis sufferers, many of whom would have been entirely without means of subsistence because the bread-winner was unable to work having been hospitalised or put off work whilst undergoing treatment.

The Friends of the Sick Association (FOSA) gave assistance to the Indian community and provided grants of R13 440 during the year.

## V. VENEREAL DISEASES

### INTRODUCTION

This report is in respect of all Special Clinics operated in Durban but does not reflect cases treated at hospitals, by district surgeons nor private practitioners as no return to the local authority is legally required.

The trend in reduction in the overall incidence as indicated by new cases attending clinics has continued during the last five years with minor fluctuation within race groups. This is in direct contrast to the situation reported in Europe and North America where there has been a steady rise. However, the rates are high in all race groups when compared to the rates reported from Europe.

There are three Special Clinics in Durban situated at Addington Hospital for Whites and Coloureds, at King Edward VIII Hospital for Bantu and Indians, and in the kwa-Mashu Bantu Township for Bantu. The Addington Hospital clinic is conducted by the Provincial Administration on behalf of the Durban City Council and the other clinics by the City Health Department.

### NEW CASES

The Total number of new cases of all races seen in Durban at the Special Clinics during 1972 was 24 281 compared with 24 068 during 1971. Of these, 16 671 were new City cases which represents a rate of 2,16 per 100 population. This figure represents a slight decrease compared with the rate for the previous year.

The following table sets out the numbers of new City cases in racial groups this year, last year and 10 years ago with the rate of venereal disease per 100 population :-

| NEW CITY CASES | | | | | | ATTACK RATE PER 100 POPULATION | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | White | Col. | Bantu | Indian | Total | White | Col. | Ban. | Ind. | Total |
| 1963 | 432 | 481 | 12 630 | 946 | 14489 | 0,25 | 1,76 | 6,56 | 0,40 | 2,30 |
| 1971 | 455 | 286 | 15 033 | 887 | 16661 | 0,23 | 0,65 | 7,19 | 0,29 | 2,21 |
| 1972 | 511 | 171 | 14 975 | 1 014 | 16671 | 0,25 | 0,38 | 6,97 | 0,32 | 2,16 |

## TOTAL ATTENDANCES

The total attendances of City and ex-City cases at all three clinics was 55 827, a decrease of 1,24% compared with the previous year's total of 56 525. The tables attached set out in racial groups the new cases and total attendances at the various clinics in Durban during 1972.

## CLINIC SERVICES

Addington Hospital: This clinic is conducted by the Provincial Administration which is reimbursed by the Durban Municipality on a per capita basis in respect of City cases treated. One session is held each day from Monday to Saturday for Whites and Coloureds. Attendances (City and ex-City cases) for the year were as follows:-

| Race | New Cases | | | Total Attendances | | |
|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total |
| White | 521 | 61 | 582 | 1 603 | 162 | 1 765 |
| Coloured | 164 | 16 | 180 | 590 | 46 | 636 |

Congella and kwaMashu: These clinics which are operated by this Department have functioned satisfactorily, but one of the three Medical Officer posts has been vacant for most of the year, considerably increasing the work load on the remaining two officers.

The Congella clinic in the grounds of King Edward VIII Hospital is open all day Mondays to Fridays. The kwaMashu Clinic functions for one three-hour morning session per week.

Attendances (City and ex-City cases) at these two clinics during the year were:-

| Race | New Cases | | | Total Attendances | | |
|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total |
| Bantu | 15 464 | 6 865 | 22 329 | 36 598 | 14 494 | 51 092 |
| Indian | 700 | 490 | 1 190 | 1 427 | 907 | 2 334 |

## TREATMENT

Benzathine penicillin is the backbone of drugs used at the clinics and has given excellent results and no sensitivity

STATISTICAL SUMMARY : CITY AND EX-CITY CASES TREATED IN 1972

| Details | White | | | | Coloured | | | | Bantu | | | | Indian | | | | Total | | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | City | | Ex-City | | City | | Ex-City | | City | | Ex-City | | City | | Ex-City | | | | |
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | City | Ex-City | |
| New cases | 450 | 61 | 71 | - | 144 | 27 | 32 | 3 | 11 701 | 3 274 | 3 763 | 3 591 | 604 | 410 | 84 | 66 | 16 671 | 7 610 | 24 281 |
| Total Attendance | 1 519 | 162 | 84 | - | 568 | 66 | 44 | 9 | 28 525 | 7 196 | 8 073 | 7 298 | 1 228 | 748 | 177 | 130 | 40 012 | 15 815 | 55 827 |

## VENEREAL DISEASES IN DURBAN DURING 1972

(N.B. This table refers to number of diseases diagnosed NOT number of cases )

| DETAILS | NEW CASES | | | | | | | | | | TOTAL ATTENDANCES | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | White | | Col. | | Bantu | | Indian | | Total | | White | | Col. | | Bantu | | Indian | | Total | |
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| 1. Sero-negative primary syphilis | 9 | - | 4 | - | - | - | - | - | 13 | - | 27 | - | 4 | - | - | - | - | - | 31 | - |
| 2. Sero-positive primary syphilis | 6 | 1 | 4 | 4 | 1 063 | 323 | 16 | 8 | 1 089 | 336 | 95 | 8 | 38 | 7 | 2 723 | 687 | 53 | 23 | 2 909 | 725 |
| 3. Secondary syphilis | - | - | - | - | 159 | 543 | 6 | 13 | 165 | 556 | - | - | - | - | 386 | 1 143 | 11 | 23 | 397 | 1 166 |
| 4. Tertiary syphilis (clinically recognised) | 2 | 1 | - | 1 | - | - | - | - | 2 | 2 | 13 | 5 | 1 | 11 | - | - | - | - | 14 | 16 |
| 5. Latent syphilis (diagnosed on result of sero-logical test alone) | 5 | 1 | 1 | 2 | 353 | 577 | 12 | 26 | 371 | 606 | 38 | 12 | 12 | 3 | 1 237 | 1 751 | 42 | 81 | 1 329 | 1 847 |
| 6. Neuro-syphilis | | | | | | | | | | | | | | | | | | | | |
| 7. Congenital syphilis (under 1 year) | - | - | - | - | 62 | 61 | 2 | 2 | 64 | 63 | - | - | - | - | 174 | 172 | 4 | 5 | 178 | 177 |
| 8. Congenital syphilis (over 1 year) | - | - | - | - | 8 | 5 | - | - | 8 | 5 | - | - | - | - | 14 | 20 | - | - | 14 | 20 |
| Total syphilis | 22 | 3 | 9 | 7 | 1 645 | 1 509 | 36 | 49 | 1 712 | 1 568 | 173 | 25 | 55 | 21 | 4 534 | 3 773 | 110 | 132 | 4 872 | 3 951 |
| 9. Gonorrhoea | 287 | 23 | 101 | 6 | 6 460 | 1 433 | 239 | 121 | 7 087 | 1 583 | 977 | 75 | 398 | 20 | 14 691 | 3 074 | 494 | 225 | 16 560 | 3 394 |
| 10. G.C. vulvo-vaginitis | - | - | - | - | - | 2 | - | - | - | 2 | - | - | - | - | - | 4 | - | - | - | 4 |
| 11. G.C. Ophthalmia | - | - | - | - | 18 | 28 | - | - | 18 | 28 | - | - | - | - | 45 | 44 | 4 | - | 49 | 44 |
| Total G.C. infections | 287 | 23 | 101 | 6 | 6 478 | 1 463 | 239 | 121 | 7 105 | 1 613 | 977 | 75 | 398 | 20 | 14 736 | 3 122 | 498 | 225 | 16 609 | 3 442 |
| 12. Ulcus Molle | - | - | - | - | 3 664 | 696 | 134 | 51 | 3 798 | 747 | - | - | - | - | 8 837 | 1 427 | 316 | 91 | 9 153 | 1 518 |
| 13. Lymphogranuloma venereum | - | - | - | - | 21 | 1 | 1 | - | 22 | 1 | - | - | - | - | 43 | 5 | 2 | - | 45 | 5 |
| 14. Granuloma inguinale | - | - | - | - | 167 | 6 | - | - | 167 | 6 | - | - | - | - | 317 | 13 | 2 | - | 319 | 13 |
| 15. Venereal warts | 2 | - | 2 | - | 600 | 161 | 17 | 14 | 621 | 175 | 2 | - | 2 | - | 1 726 | 430 | 37 | 25 | 1 767 | 455 |
| 16. Non-specific urethritis | 94 | - | 15 | - | 1 034 | 5 | 25 | 2 | 1 168 | 7 | 240 | - | 45 | - | 2 417 | 16 | 39 | 2 | 2 741 | 18 |
| 17. Non-venereal | 116 | 35 | 37 | 4 | 2 191 | 3 161 | 241 | 241 | 2 585 | 3 441 | 211 | 62 | 90 | 9 | 4 647 | 6 010 | 411 | 416 | 5 359 | 6 497 |
| Total | 212 | 35 | 54 | 4 | 7 677 | 4 030 | 418 | 308 | 8 361 | 4 377 | 453 | 62 | 137 | 9 | 17 987 | 7 901 | 807 | 534 | 19 384 | 8 506 |
| Grand Total | 521 | 61 | 164 | 17 | 15 800 | 7 002 | 693 | 478 | 17 178 | 7 558 | 1 603 | 162 | 590 | 50 | 37 257 | 14 796 | 1 415 | 891 | 40 865 | 15 899 |
| Total of Races | 582 | | 181 | | 22 802 | | 1 171 | | 24 736 | | 1 765 | | 640 | | 52 053 | | 2 306 | | 56 764 | |

reactions were recorded during the year. Resistance to penicillin treatment was not found, but selected cases of gonorrhoea were treated with 'Trobicin' and 'Bactrim'. Erythromycin is kept in stock for patients with a known sensitivity to penicillin.

CONTACTS

Contact tracing continued to be fruitful and a total of 1 751 visits were made to refer contacts of cases to clinics. Of this total, 45,23% attended for investigation and treatment, which is a slight decrease compared with the previous year's 46,06%. None the less the figure is regarded as satisfactory.

DEFAULTERS:

During the year 6 631 visits were made to trace and refer defaulters back to the clinics at King Edward VIII Hospital and kwaMashu. Of these, 59,52% cases responded and attended the clinics, making the effort most worthwhile.

ANTE-NATAL CASES

A total of 2 859 selected ante-natal cases were referred to the Congella and kwaMashu clinics. Of these, 615 (21,51%) were proved serologically positive and were subsequently treated.

LABORATORY EXAMINATIONS

(a) Departmental Side-room

Examinations were undertaken of urethral and vaginal smears and spun urine deposits for gonococci and other organisms. At the Congella and kwaMashu clinics the following examinations were performed -

| | | |
|---|---|---|
| Smears | - | 19 892 with 10 447 positive for gonococci (52,52%) |
| Urines | - | 2 081 with 994 positive for gonococci (47,77%) |

(b) State Laboratory

Serological examinations on patient blood specimens taken at the Congella and kwaMashu Special Clinics were carried out by the State Health Laboratory in Currie Road, Durban. During the year 29 320 VDRL tests were done, of which 5 379 (18,34%) were reactive.

## VI. FAMILY HEALTH

### A. MATERNAL HEALTH

#### (i) Ante-Natal Clinics

An ante-natal service is conducted for those persons who elect to be confined in their own homes by registered listed Coloured midwives and unregistered listed Coloured and Indian midwives authorised in terms of the Public Health Act to practise within the Durban Municipal area. A Medical Officer is in attendance at these clinics, and exfoliative cytology smears from selected patients are taken. Of the 293 cases so examined, no cases of malignancy were found. District midwifery services are rendered only in the kwaMashu township operating from the Provincial Administration's Polyclinic in this area.

Midwives listed comprise two trained Coloured midwives, two untrained Coloureds and 28 untrained Indians. These persons are under the guidance of a supervisor of midwives and instructed on the requirements of the legislation gazetted under Government Notice No. R650 and R651 of 1971. Each midwife is compelled to maintain a bag which is replenished after every confinement under inspection.

Post-natal visits are paid to all races by the Public Health nurses who routinely follow up birth notifications.

Details of attendances at the ante-natal clinics are set out below :-

| Details | White | Coloured | Indian | Total 1972 | Total 1971 |
|---|---|---|---|---|---|
| Ante-natal clinic sessions | 12 | 12 | 98 | 122 | 117 |
| Attendances | 21 | 49 | 1 001 | 1 071 | 1 433 |
| Rhesus factor tests | 12 | 20 | 308 | 340 | 445 |
| Exfoliative cytology tests | 9 | 16 | 268 | 293 | 394 |
| Haemoglobin tests | 13 | 20 | 308 | 341 | 466 |
| Kolmer/VDRL tests | 12 | 20 | 303 | 335 | 441 |
| Ante-natal visits | 29 | 1 | 180 | 210 | 190 |
| Post-natal visits by Supervisor | 2 | 8 | 429 | 439 | 493 |

(ii) Facilities for Maternity Cases

Accommodation for maternity cases in Durban was provided by the following Provincial and private hospitals:-

| Institutions | Maternity Beds | | | | |
|---|---|---|---|---|---|
| | W | C | I/B | Total 1972 | Total 1971 |
| 1. Provincial | | | | | |
| Addington Hospital | 47 | 42 | - | 89 | 52 |
| King Edward VIII Hospital | - | - | 239+ | 239 | 239 |
| 2. Private | | | | | |
| St. Aidan's Hospital | - | - | 30++ | 30 | 42 |
| St. Augustine's Hospital | 30 | - | - | 30 | 34 |
| Parklands Nursing Home | 22 | - | - | 22 | 25 |
| Mothers' Hospital | 42 | - | - | 42 | 43 |
| McCord's Zulu Hospital | - | - | 70+++ | 70 | 65 |
| Shifa Hospital | - | - | 13 | 13 | 16 |
| Total | 141 | 42 | 352 | 535 | 516 |

\+ Indian and Bantu
++ Indian and Coloured
+++ Bantu and Coloured

(iii) Supervision of Midwives

Listed midwives are supervised by a Public Health Nurse who examines registers and equipment and visits ante-natal and post-natal cases as well as midwives at home. Any case of ophthalmia neonatorum is investigated by a Public Health Nurse.

Details of midwife supervision are as follows:-

| Details | White | Coloured | Indian | Total 1972 | Total 1971 |
|---|---|---|---|---|---|
| Certificated midwives | - | 2 | - | 2 | 2 |
| Confinements | 11 | 19 | 38 | 68 | 85 |
| Non-certificated midwives | - | 2 | 28 | 30 | 33 |
| Confinements | - | 3 | 447 | 450 | 543 |
| Midwives appliances examined | - | 8 | 216 | 224 | 248 |
| Visits to mid-wives at home | - | 3 | 247 | 250 | 327 |

A reduction in confinements from the previous year is noted and it is hoped that the service provided by non-certificated midwives will disappear over the next few years.

(iv) Family Planning

Family planning clinics were commenced by this Department in 1967 when the Durban City Council adopted a recommendation that there be a gradual take-over from the Natal Association for Maternal and Family Welfare. The first three clinics to serve the Indian community were commenced at Merebank and Chatsworth in August, 1967. In September 1969 a clinic for Indians and Bantu commenced at Newlands and in August 1970 two for Bantu at Lamontville and kwaMashu and one for Coloureds in Sparks Estate. A further Indian clinic at the Chatsworth Township Centre was opened in April 1971 in conjunction with a child health service; in October 1971 the new Rydalvale clinic in kwaMashu was completed and a second session was introduced in October, 1972. In November, 1972, a weekly session started at the central Bantu clinic in Lancers Road. In May 1972 a Coloured clinic was opened in the Wentworth Government Village/Austerville area for issue of supplies only as the premises were unsuitable for examination, patients being referred to the Sparks Estate clinic for this purpose.

A complete re-organisation of family planning services will be undertaken during next year, the intention being to provide staff specialised in family planning to operate family planning clinics on a full-time basis rather than to use other family health staff on a less intensive basis. There is no doubt at all that family planning requires considerable skill on the part of public health and trained nurses if services are to be run without direct supervision by medical officers, of whom there is a great shortage. Thus the only way to meet the need is to have intensively trained personnel continually doing the work.

A further need is the provision of facilities for the insertion of intra-uterine devices at clinics and this will be possible when a proposed post of full-time Medical Officer (Family Planning) is authorised and filled in the near future. All clinics are presently conducted as part of the integrated family health service. A medical officer is usually in attendance and sees all new cases as well as certain old cases for re-examination. The majority of clinic attenders are on the oral contraceptive regime. The injection of a long-acting progesterone product at three monthly intervals was also used and a total of 6 121 injections were given in 1972, (3 809 in 1971).

Details of attendances at family planning clinics are tabulated below :-

| Community and Venue | Sessions | First Attendance | Re-attendance | Total Attendance 1972 | Total Attendance 1971 |
|---|---|---|---|---|---|
| Coloured | | | | | |
| Sparks Estate | 51 | 226 | 1 658 | 1 884 | 1 753 |
| Wentworth Government Village/ Austerville (from 22.5.72.) | 48 | 110 | 452 | 562 | - |
| Total | 99 | 336 | 2 110 | 2 446 | 1 753 |
| Bantu | | | | | |
| Goodwins Cottage, kwaMashu | 50 | 637 | 4 298 | 4 935 | 3 762 |
| Lamontville | 51 | 583 | 3 052 | 3 635 | 2 252 |
| Lancers Road (from 20.11.72) | 5 | 29 | 2 | 31 | - |
| Newlands | 17 | 1 | 26 | 27 | 35 |
| Rydalvale, kwaMashu | 61 | 1 277 | 4 884 | 6 161 | 422 |
| Total | 184 | 2 527 | 12 262 | 14 789 | 6 471 |
| Indian | | | | | |
| Bayview, Chatsworth | 149 | 584 | 9 161 | 9 745 | 9 501 |
| Woodhurst, Chatsworth | 146 | 369 | 5 354 | 5 723 | 8 311 |
| Merebank | 149 | 307 | 6 833 | 7 140 | 6 072 |
| Newlands | 50 | 131 | 1 907 | 2 038 | 1 698 |
| Chatsworth Township Centre | 249 | 1 151 | 15 560 | 16 711 | 7 788 |
| Total | 743 | 2 542 | 38 815 | 41 357 | 33 370 |
| Grand Total | 1 026 | 5 405 | 53 187 | 58 592 | 41 594 |

Of the total attendances of 58 592, 16 886 patients were examined by medical officers compared with 15 647 in 1971. Detailed records are kept of all patients and defaulters are visited wherever possible. In this respect the Bantu present a particular problem as many are found to have left for the rural areas.

The following table depicts attendances at family planning clinics since their inception and the yearly percentage increase in attendances :-

| Year | Attendances | Percentage Increase over Previous Year |
|---|---|---|
| 1967 | 3 831 | - |
| 1968 | 13 744 | - |
| 1969 | 19 097 | 38,95% |
| 1970 | 26 105 | 36,70% |
| 1971 | 41 594 | 59,33% |
| 1972 | 58 592 | 40,87% |

There is obviously much to be done to make family planning effective. It is hoped to obtain statistics from the 1970 National Census to show the number of females in the age group 15-45 years according to race. It will then be possible to gauge just what percentage are being reached and a clear direction will emerge of where the main effort should be directed.

(v) Cervical Exfoliative Cytology

Since 1963 the City Council has offered a free cervical exfoliative cytology service to Durban women through their private medical practitioners. This service was extended in 1971 to include women attending the departmental family planning clinics. The microscopic examination is undertaken by the cytology unit of the Natal Provincial Hospital Laboratory Services at a fee of R1,50 per patient, which charge is borne by the Council. In addition to the above tests, smears are also taken at ante-natal clinics operated by this Department and are examined free of charge at the State Health Laboratory.

The total number of all the above cytology examinations and the number of cases of malignancy confirmed, are set out in the following table:-

| Year | Total Examinations | Repeat Examinations | Confirmed Malignancy |
|---|---|---|---|
| 1963 | 2 614 | 34 | 12 |
| 1964 | 2 915 | 324 | 18 |
| 1965 | 3 807 | 590 | 25 |
| 1966 | 4 754 | 611 | 26 |
| 1967 | 5 199 | 630 | 22 |
| 1968 | 5 785 | 718 | 15 |
| 1969 | 7 306 | 1 326 | 17 |
| 1970 | 8 192 | 2 738 | 16 |
| 1971 | 11 575 | 3 406 | 22 |
| 1972 | 15 599 | 4 524 | 16 |
| Total | 67 746 | 14 901 | 189 |

## EXFOLIATIVE CYTOLOGY

## EXAMINATIONS

## YEAR 1972

| Age Group in Years | WHITES | | | | | COLOUREDS | | | | | BANTU | | | | | INDIANS | | | | | TOTALS | | | GRAND TOTAL | CONFIRMED MALIGNANCY | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Initial | RA | RR | Total | CM | Initial | RA | RR | Total | CM | Initial | RA | RR | Total | CM | Initial | RA | RR | Total | CM | Initial | RA | RR | | 1972 | 1971 |
| Under 30 | 2 731 | 1 056 | 9 | 3 796 | 4 | 156 | 25 | 2 | 183 | - | 955 | 51 | 6 | 1 012 | 2 | 1 793 | 112 | 4 | 1 909 | - | 5 635 | 1 244 | 21 | 6 900 | 6 | 3 |
| 30-39 | 1 568 | 1 323 | 7 | 2 898 | 1 | 94 | 17 | - | 111 | - | 405 | 38 | - | 443 | 2 | 922 | 31 | 4 | 957 | - | 2 989 | 1 409 | 11 | 4 409 | 3 | 6 |
| 40-49 | 918 | 923 | 9 | 1 850 | 2 | 35 | 12 | - | 47 | - | 72 | 8 | - | 80 | - | 207 | 18 | 2 | 227 | - | 1 232 | 961 | 11 | 2 204 | 2 | 8 |
| 50-59 | 433 | 481 | 8 | 922 | 3 | 4 | 3 | - | 7 | - | 3 | - | - | 3 | - | 27 | 9 | - | 36 | - | 467 | 493 | 8 | 968 | 3 | 1 |
| Over 60 | 166 | 117 | 5 | 288 | 1 | 1 | - | - | 1 | - | 1 | - | - | 1 | - | 10 | 5 | - | 15 | 1 | 178 | 122 | 5 | 305 | 2 | 4 |
| Not Stated | 310 | 213 | 1 | 524 | - | 18 | 3 | 1 | 22 | - | 153 | 12 | 3 | 168 | - | 93 | 5 | 1 | 99 | - | 574 | 233 | 6 | 813 | - | - |
| Totals | 6 126 | 4 113 | 39 | 10 278 | 11 | 308 | 60 | 3 | 371 | - | 1 589 | 109 | 9 | 1 707 | 4 | 3 052 | 180 | 11 | 3 243 | 1 | 11 075 | 4 462 | 62 | 15 599 | 16 | 22 |

RA = Repeat Annual
RR = Repeat Request
CM = Confirmed Malignancy

| | |
|---|---|
| Initial Smears | = 71,00% |
| Repeat Annual Smears | = 28,60% |
| Repeat Request Smears | = 0,40% |
| | 100,00% |

A further analysis of the 1972 totals is subjoined, setting out initial, annual and repeat examinations according to age and race group.

Of the 16 confirmed cases of malignancy there were:-

12 cases of carcinoma-in-situ
2 cases of squamous-cell carcinoma
1 case of adenocarcinoma of endometrium
1 case of intra-epithelial carcinoma

16

B. CHILD HEALTH

(i) Clinics

The child health clinics were held at 36 venues throughout the Municipal area during the year. The main functions are to advise and educate mothers with infants and pre-school children and maintain a satisfactory immunization state. The premises used for Whites are mainly hired for the purpose. There are six purpose-designed Municipal clinic buildings in use: one in the central area for Whites and Coloureds, three in Chatsworth and one in Merebank for Indians, and one in the kwaMashu Township for Bantu. Changes during the year included a third venue for Whites on the Bluff, a second session for Coloureds at Austerville from April and a reduction of one clinic session at Newlands due to falling attendances in this area following population shifts prior to re-development.

Details of sessions and attendances at clinics are shown in the following tables:-

WHITE

| Clinic Venue | Sessions | Attendances |
|---|---|---|
| Bellair | 25 | 1 122 |
| Brighton Beach (from 7.2.1972) | 44 | 1 200 |
| Cunningham Road | 12 | 212 |
| Durban North (2) | 51 | 2 732 |
| Fynnlands | 51 | 4 847 |
| Greyville | 51 | 4 282 |
| Hillary | 25 | 1 294 |
| Mayville | 48 | 1 868 |
| Montclair | 50 | 4 098 |
| Morningside | 50 | 3 576 |
| Old Fort Place | 84 | 2 311 |
| Overport | 98 | 4 782 |
| Point | 47 | 5 142 |
| Redhill | 28 | 1 147 |
| Seaview | 47 | 2 465 |
| Warwick Avenue | 199 | 11 777 |
| Wentworth | 51 | 3 475 |
| Woodlands | 51 | 2 427 |
| Total 1972 | 1 012 | 58 757 |
| Total 1971 | 939 | 59 679 |

This reflects a fractional decrease in total attendances compared with 1971.

The Warwick Avenue clinic, which is centrally situated, serves four districts and is in operation for five days each week. Other venues are in use once weekly, fortnightly or according to needs.

COLOURED

| Clinic Venue | Sessions | Attendances |
|---|---|---|
| Austerville | 136 | 15 236 |
| Mayville | 66 | 6 759 |
| Redhill | 50 | 5 285 |
| Sparks Estate | 202 | 11 555 |
| Warwick Avenue | 95 | 6 368 |
| Wentworth Government Village | 47 | 9 307 |
| Total 1972 | 596 | 54 510 |
| Total 1971 | 591 | 52 805 |

A purpose-designed Municipal clinic is planned for the Austerville/Wentworth Government Village area and it is hoped this will be ready for occupation early in 1974. The present accommodation is unsuitable and even the introduction of a third session to relieve congestion has not materially improved matters.

BANTU

| Clinic Venue | Sessions | Attendances |
|---|---|---|
| Chesterville | 195 | 20 519 |
| Goodwins Cottage )kwa- | 296 | 43 156 |
| Rydalvale )Mashu | 448 | 100 514 |
| Lamontville | 394 | 40 805 |
| Lancers Road | 147 | 13 673 |
| Newlands | 5 | 10 |
| Total 1972 | 1 485 | 218 677 |
| Total 1971 | 1 531 | 219 798 |

The total attendances are fractionally less than for the previous year. At the Newlands Clinic, Bantu sessions are conducted conjointly with Indian sessions.

INDIAN

| Clinic Venue | Sessions | Attendances |
|---|---|---|
| Asherville | 98 | 15 314 |
| Bayview, Chatsworth | 234 | 56 028 |
| Woodhurst, Chatsworth | 284 | 36 107 |
| Chatsworth Township Centre | 249 | 71 039 |
| Clairwood | 202 | 22 800 |
| Lancer's Road | 253 | 33 164 |
| Mayville | 98 | 8 508 |
| Merebank | 245 | 23 760 |
| Newlands | 189 | 14 733 |
| Reservoir Hills | 47 | 6 779 |
| Total 1972 | 1 899 | 288 232 |
| Total 1971 | 1 833 | 261 184 |

Attendances increased by 27 048, the largest increase being at Reservoir Hills where there was a 123% increase compared with the previous year. A purpose-designed clinic to serve this and the Clare Estate area is being planned, the present hired premises having become totally inadequate.

Summary

The total number of clinic sessions and attendances for all racial groups was as follows:-

| Details | White | Coloured | Bantu | Indian | Total 1972 | Total 1971 |
|---|---|---|---|---|---|---|
| Clinic Sessions | 1 012 | 596 | 1 485 | 1 899 | 4 992 | 4 944 |
| Attend-ances | 58 757 | 54 510 | 218 677 | 288 232 | 620 176 | 593 466 |
| New Cases | 3 183 | 1 769 | 10 151 | 12 136 | 27 239 | 28 265 |
| Cases seen by doctor | 3 513 | 2 987 | 7 848 | 4 815 | 19 163 | 24 689 |

The reduction in cases seen by the medical officers at clinics is due to two main reasons. Firstly, a shortage of medical manpower coupled with an extremely low rate of remuneration, and secondly the time now devoted to family planning work.

(ii) Home Visiting

On receipt of birth notifications, mothers of all races, except those confined by private medical practitioners (unless requested), were visited as soon as possible after

## HOME VISITING TO VARIOUS RACE GROUPS

YEAR : 1972

| Community | Number of Premises Visited | INVESTIGATIONS | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | New Births (a) | Behaviour Problems (b) | Routine (c) | Family Planning (d) | Defaulters (d1) | Feeding Advice (e) | Illness (f) | Immunisation (g) | Mental Health (h) | Health Education* (i) | Miscella-neous** (j) | Wasted (k) | Total |
| White | 10 421 | 2 073 | 115 | 2 345 | 27 | 2 | 1 518 | 998 | 1 050 | 133 | 19 | 585 | 2 473 | 11 338 |
| Coloured | 4 660 | 1 538 | 11 | 749 | 524 | 79 | 134 | 63 | 1 487 | 13 | 10 | 100 | 534 | 5 242 |
| Bantu | 13 906 | 5 423 | 31 | 1 644 | 2 807 | 782 | 1 370 | 992 | 3 846 | 70 | 378 | 944 | 2 834 | 21 121 |
| Indian | 14 335 | 7 529 | 1 | 132 | 1 372 | 1 905 | 580 | 117 | 1 766 | 13 | 5 | 221 | 2 390 | 16 031 |
| Total 1972 | 43 322 | 16 563 | 158 | 4 870 | 4 730 | 2 768 | 3 602 | 2 170 | 8 149 | 229 | 412 | 1 850 | 8 231 | 53 732 |
| Total 1971 | 44 888 | 16 625 | 114 | 6 321 | 5 161 | 2 614 | 5 048 | 2 581 | 9 455 | 218 | 1 689 | 2 120 | 8 676 | 60 622 |

* Health Education being constantly disseminated as an integral part of all home visits.

** Miscellaneous included the following: neglect, protected infants, ante-natal, handicapped, geriatrics, kwashiokor, and any other category not listed.

their discharge from hospital. Other home visits were made where necessary to defaulters from immunization and family planning clinics as well as for general problems of infant care, physical and mental health, and certain routine follow-ups. Geriatric patients were also visited as a result of specific reports.

Following requests by the Durban Child Welfare Society, a total of 90 visits were made to White and Coloured protected infants, foster children and cases of alleged neglect. The Bantu Child Welfare Society was notified of home conditions and health of foster children.

(iii) State Subsidised Skim Milk Powder Scheme

The distribution of State subsidised skim milk powder for the prevention of kwashiorkor continued at all child health clinics. A total of 276 826 packets of 500 grams each were issued, of which 14 380 packets were given free to indigent families. The vast majority was issued at non-White clinics at 5 cents per packet. This price to the mothers has been held despite the increasing cost of this commodity which has been borne in the main by the State, and by the Council to a lesser degree.

(iv) Other Dietary Assistance

(a) Additional assistance was given by the Municipal Bantu Administration Department:-

(1) a varying amount of full cream dried milk was issued free of charge for special cases;

(2) fresh milk was sold at 8 cents per litre, varying in quantity from 400 to 484 litres per day.

(b) The other sources of assistance were from two voluntary organisations, the Malnutrition Relief Association and the Feed the Babies Fund:-

(1) full cream powdered milk was sold at 15 cents per 500 gram packet to selected cases. A total of 9 910 packets were distributed on behalf of the Malnutrition Relief Association;

(2) a pre-cooked cereal, also for selected cases, was sold at 5 cents per 500 gram packet.

A total of 21 747 packets were sold and 2 233 packets issued free on behalf of the Feed the Babies Fund.

Towards the latter half of the year the functions of these two voluntary organisations were rationalised. The Malnutrition Relief Association now supplies the pre-cooked cereal previously issued by the Feed the Babies Fund which in turn now only provides food supplements for selected "adopted" children of pre-school age. These children are selected by departmental Health Visitors.

(v) Kwashiorkor

From deaths certified during the year, 23 were due to kwashiorkor and comprised 21 Bantu and two Coloureds.

Twenty of the Bantu cases were found to have come from the rural areas while the one local case was under the charge of an older child, the mother being in employment. Both Coloured children were clinic defaulters on whose parents home visiting was wasted.

Malnutrition

Deaths from malnutrition (including kwashiorkor) under five years of age, are reflected below:-

| Year | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1962 | - | 2 | 102 | 8 | 112 |
| 1963 | - | 2 | 83 | 4 | 89 |
| 1964 | - | 1 | 78 | 7 | 86 |
| 1965 | - | - | 72 | 3 | 75 |
| 1966 | - | 1 | 27 | 3 | 31 |
| 1967 | - | 3 | 19 | 5 | 27 |
| 1968 | - | - | 52 | 3 | 55 |
| 1969 | - | - | 45 | - | 45 |
| 1970 | - | - | 30 | - | 30 |
| 1971 | - | 1 | 38 | 1 | 40 |
| 1972 | - | 4 | 27 | 1 | 32 |

(vi) Creches, Places of Care and Nursery Schools

These institutions, catering for children mainly in the two to six year age group, were visited periodically throughout the year. They are registered under their respective authority be it Department of Social Welfare, Department of Bantu Administration, Department of Coloured Affairs or the National Provincial Education Department. New institutions applying for registration are supplied with a departmental code of practice setting out public health requirements. Two new places of care for White children were registered. Many premises were inspected but proved inadequate in terms of the new standards. One creche in particular, caring for 80 children, was poorly managed and the co-operation of the Department of Social Welfare was obtained to order its closure in the new year.

C. GENERAL

(i) Old Age Homes

Old age homes in the City are required to apply for registration with the Department of Social Welfare. Three homes were inspected, and recommended for registration, making a total of 15 in the Durban area falling under the Aged Persons Act No.81 of 1967.

(ii) Lectures, Demonstrations and In-Service Training

Lectures, demonstrations and in-service training were given to the following students: public health nurses (White, Coloured and Indian); pupil midwives from Addington Hospital (White); pupil nurses from King Edward VIII and McCords Hospital (Bantu); diploma of nursing students (B.Sc. White) as well as Bantu sister tutor students from the University of Natal.

IMMUNIZATION

Facilities for the maintenance of an adequate immunization state of the population at risk are provided free of charge at departmental Family Health clinics throughout the City. Immunization at these clinics is available against diphtheria, pertussis, tetanus, poliomyelitis, smallpox and more recently measles. A central immunization clinic is conducted in the department's main building where inoculation of foodhandlers against typhoid and paratyphoid is also conducted.

In August, the routine schedule of immunization was adjusted, whereby a six-weekly, instead of four-weekly interval for the administration of diphtheria, pertussis and tetanus vaccine and oral poliomyelitis doses was introduced. The second diphtheria-tetanus booster at four years of age was eliminated, and the school programme changed so that every new entrant to school at six years of age received a diphtheria-tetanus booster.

In October, measles vaccine administration was commenced in Bantu clinics for the age group 9 - 18 months, later altered to $4\frac{1}{2}$ - 18 months of age. This service will gradually be extended to other non-White clinics. A total of 374 Bantu were immunized in 1972.

In October, rubella vaccine was administered to girls at white high schools in the 12 - 13 years age group, with their parents' signed consent. This vaccine was given by syringe in single doses, and a total of 1 003 girls were immunized. This vaccine will in future be obtained in 50 c.c. vials, and will be given with the multi-dose pedo-jet apparatus, which is used for the schools programmes.

Parents are reminded of immunization when their infants reach three months of age by means of a routine card despatched by this Department. These particulars are obtained from the birth notification records. Children of all races at nursery schools, play centres and primary schools are visited by school immunization teams. Children under three years are given the triple antigen diphtheria-pertussis-tetanus whereas combined diphtheria-tetanus vaccine

is given to those over three years and under 10 years of age. Immunization is only given after written parental consent has been obtained.

Further immunization of non-Whites was carried out in the field from two purpose-designed mobile vans.

A house-to-house poliomyelitis immunization and smallpox vaccination programme for Bantu children continued into the first few months of the year and was again instituted in October following a fall-off in immunization. New entrants to Bantu schools also flocked to clinics for poliomyelitis immunization after school principals insisted on evidence of immunization.

Vaccination against Smallpox

The number of vaccinations carried out during 1972 is reflected in the following table:-

| Vaccinations | White | Coloured | Bantu | Indian | Total 1972 | Total 1971 |
|---|---|---|---|---|---|---|
| Primary | 3 711 | 2 063 | 8 065 | 12 194 | 26 033 | 24 533 |
| Re-vaccinations | 273 | 115 | 262 | 298 | 948 | 7 367 |
| Total | 3 984 | 2 178 | 8 327 | 12 492 | 26 981 | 31 900 |

This figure does not include vaccinations performed by private medical practitioners, the Port Health Officer or the Bantu Administration Department.

Combined Diphtheria, Tetanus, Pertussis Vaccine

This combined triple antigen is administered to children from three months to three years of age:-

| Age Group | DTP Dose | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|---|
| Under 1 Year | 1st | 2 810 | 1 677 | 6 903 | 9 444 | 20 834 |
| | 2nd | 2 615 | 1 517 | 4 697 | 8 506 | 17 335 |
| | 3rd | 2 393 | 1 301 | 3 447 | 7 678 | 14 819 |
| | Total | 7 818 | 4 495 | 15 047 | 25 628 | 52 988 |
| 1 - 3 Years | 1st | 145 | 134 | 1 457 | 671 | 2 407 |
| | 2nd | 140 | 118 | 1 147 | 575 | 1 980 |
| | 3rd | 174 | 166 | 1 125 | 887 | 2 352 |
| | Booster | 2 043 | 1 170 | 1 284 | 7 274 | 11 771 |
| | Total | 2 502 | 1 588 | 5 013 | 9 407 | 18 510 |
| Grand Total | | 10 320 | 6 083 | 20 060 | 35 035 | 71 498 |

The total for 1971 was 74 639.

Combined Diphtheria and Tetanus Immunization

This combined antigen was administered to children over three years of age at clinics and pre-school institutions and as a booster to schoolchildren.

Details are summarised as follows :-

| Age Group | DT Dose | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|---|
| Under 1 Year | 1st | 11 | 22 | 7 | 22 | 62 |
| | 2nd | 21 | 12 | 8 | 14 | 55 |
| | 3rd | 17 | 5 | - | 9 | 31 |
| | Total | 49 | 39 | 15 | 45 | 148 |
| 1-6 Years | 1st | 123 | 148 | 1 025 | 1 414 | 2 710 |
| | 2nd | 115 | 127 | 688 | 946 | 1 876 |
| | 3rd | 97 | 103 | 561 | 755 | 1 516 |
| | Booster | 1 342 | 878 | 971 | 4 432 | 7 623 |
| | Total | 1 677 | 1 256 | 3 245 | 7 547 | 13 725 |
| School Age | 1st | 257 | 317 | 2 817 | 2 331 | 5 722 |
| | 2nd | 189 | 305 | 2 600 | 2 169 | 5 263 |
| | 3rd | 244 | 354 | 2 050 | 2 110 | 4 758 |
| | Booster | 2 487 | 1 631 | 875 | 6 768 | 11 761 |
| | Total | 3 177 | 2 607 | 8 342 | 13 378 | 27 504 |
| Adults | 1st | 16 | 3 | - | 9 | 28 |
| | 2nd | 8 | 1 | - | 4 | 13 |
| | 3rd | 1 | - | - | 4 | 5 |
| | Booster | 2 | - | - | - | 2 |
| | Total | 27 | 4 | - | 17 | 48 |
| Grand Total | | 4 930 | 3 906 | 11 602 | 20 987 | 41 425 |

The total for 1971 was 51 327.

The decrease in total doses administered was due to the elimination of the second booster dose at 3 - 4 years of age from August. All school children in Class I receive a booster dose of diphtheria-tetanus vaccine and in Standard II a final booster of tetanus vaccine.

## Tetanus Immunization

Tetanus vaccine was administered mainly to school children as shown in the following tables:-

| Age Group | Dose | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|---|
| School Age | 1st | 6 | - | - | 1 | 7 |
| | 2nd | 3 | - | - | - | 3 |
| | 3rd | 2 | - | - | - | 2 |
| | Booster | 1 687 | 1 077 | 768 | 6 547 | 10 079 |
| | Total | 1 698 | 1 077 | 768 | 6 548 | 10 091 |
| Adults | 1st | 50 | - | 2 | - | 52 |
| | 2nd | 28 | - | 1 | - | 29 |
| | 3rd | 9 | - | - | - | 9 |
| | Booster | 30 | 2 | - | 11 | 43 |
| | Total | 117 | 2 | 3 | 11 | 133 |
| Grand Total | | 1 815 | 1 079 | 771 | 6 559 | 10 224 |

The total for 1971 was 11 826.

## Immunization against Poliomyelitis

Full details of poliomyelitis doses given are tabulated below:-

| Age Group | Dose | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|---|
| Under 1 Year | 1st | 3 285 | 1 696 | 8 148 | 9 637 | 22 766 |
| | 2nd | 3 097 | 1 560 | 5 407 | 8 769 | 18 833 |
| | 3rd | 2 876 | 1 360 | 4 178 | 7 928 | 16 342 |
| | Total | 9 258 | 4 616 | 17 733 | 26 334 | 57 941 |
| 1-4 Years | 1st | 387 | 255 | 5 298 | 1 945 | 7 885 |
| | 2nd | 380 | 233 | 4 371 | 1 466 | 6 450 |
| | 3rd | 448 | 512 | 3 673 | 4 942 | 9 575 |
| | Total | 1 215 | 1 000 | 13 342 | 8 353 | 23 910 |
| 5-9 Years | 1st | 297 | 37 | 5 754 | 644 | 6 732 |
| | 2nd | 239 | 36 | 5 906 | 345 | 6 526 |
| | 3rd | 236 | 151 | 7 066 | 2 653 | 10 106 |
| | Total | 772 | 224 | 18 726 | 3 642 | 23 364 |
| 10-19 Years | 1st | 187 | 52 | 504 | 159 | 902 |
| | 2nd | 173 | 15 | 350 | 220 | 758 |
| | 3rd | 168 | 32 | 317 | 2 709 | 3 226 |
| | Total | 528 | 99 | 1 171 | 3 088 | 4 886 |
| 20 Years and Over | 1st | 789 | 2 | 1 417 | 38 | 2 246 |
| | 2nd | 782 | - | 279 | 253 | 1 314 |
| | 3rd | 802 | 24 | 641 | 3 124 | 4 591 |
| | Total | 2 373 | 26 | 2 337 | 3 415 | 8 151 |
| Grand Total | | 14 146 | 5 965 | 53 309 | 44 832 | 118 252 |

The total for 1971 was 126 485.

Typhoid Control

Clinics were held twice weekly throughout the year for Vi-tests on selected foodhandlers and for the administration of typhoid, paratyphoid A and B vaccine, as reflected in the following tables:-

| Vi-tests | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| Blood samples | - | 1 | 569 | 55 | 625 |

The total for 1971 was 990.

No positive results were recorded.

| TAB Vaccine | White | Coloured | Bantu | Indian | Total |
|---|---|---|---|---|---|
| 1st dose | 57 | 2 | 589 | 326 | 974 |
| 2nd " | 61 | 2 | 740 | 235 | 1 038 |
| 3rd " | 27 | - | - | 216 | 243 |
| Booster | 12 | - | 473 | 47 | 532 |
| Total | 157 | 4 | 1 802 | 824 | 2 787 |

The total for 1971 was 4 968.

The above figures include inhabitants of the Newlands area where this immunization was continued after Newlands was incorporated into Durban in 1969.

# VII. HEALTH EDUCATION

## INTRODUCTION

It is axiomatic that health does not only imply absence of disease, debility or infirmity, but also a state of mental and social well being. In order to achieve these standards it is imperative to employ health education techniques and sufficient staff to reach the community. Because of differing cultural backgrounds and problems among the various population groups, it is also necessary to use appropriate health educators for the different groups and to train them fully for these tasks.

This Department has a total complement of 21 in its Health Education Section, and the main objective is health education among the Non-White race groups where the need for this education is greatest.

## WHITE COMMUNITY

### (a) Departmental Auditorium

#### 1. Exhibitions and Symposia

An exhibition on drug dependence was held in the foyer and auditorium for one week during the month of March to assist the South African National Council for Alcoholism and Drug Dependency with its drug awareness campaign. The Auditorium show-cases were filled with leaflets and propaganda as well as paintings and other work done by the inmates of Warman House as part of their rehabilitation therapy. The foyer contained posters designed by the Arts Section of the Natal College for Advanced Technical Education and photographic posters prepared by this Department. A growing "dagga" (cannabis) plant was displayed together with a wide variety of drugs, various pipes and other apparatus connected with drug use, kindly loaned by the Officer in Charge of the South African Police Drug Squad, Durban. During the exhibition three film shows were presented daily and at each session films on alcoholism, marijuana and LSD were shown. The exhibition was opened by the Mayor of Durban and was attended by some 3 500 persons. The demand for the films was so great on the Friday evening that additional shows were given.

During August the Department was privileged to have Mr. Archer Tongue, Executive Director of the International Council on Alcohol and Drug Addiction, for a morning seminar on alcoholism and drug dependence. Personal invitations were extended to prominent persons with a vital interest in this field and 160 persons attended the lectures.


THE FOYER OF THE CITY HEALTH DEPARTMENT

2. Social Clubs

On six occasions members of two Municipal social clubs viewed films on the subjects of cigarette smoking in relation to health, marijuana, food poisoning, environmental pollution and deep-freezing of foodstuffs. In addition, members of a garden club spent an evening viewing films on the subjects of environmental pollution, drugs and bilharzia.

3. Other Groups

Members of the Institute of Water Pollution Control visited the auditorium on four occasions. Talks, supported by slides, were given on "Sewage Treatment Practices in Europe", "Aerobic treatment of sugar mill effluents and additives of Nutrients", "Durban Ocean Sewage Outfalls", and "Algae growth and its effect on water supplies and purification plants." These informative presentations were attended by interested persons from the City Health and City Engineer's departments.

Lectures, supported by slide transparencies and films, arranged by the National Building Research Institute, were given to members, departmental staff and other interested persons from the Provincial Administration and Civil Engineer's Association. The topics presented on these occasions were: "A new approach to the planning of operating theatres", "Painting problems in the building industry", and "Soil mapping and land use maps in building design."

A group of parents and children visited the department and were shown films on drugs and alcoholism.

The National Association of Clean Air showed films on air pollution to its members and interested persons from the City Engineer's and City Health Departments.

The staff of this Department, as the occasion arose, were shown films pertaining to public health and covered such subjects as cancer, family planning, frozen meals, modern operating theatres, mouth-to-mouth resuscitation, closed chest cardiac massage, child welfare, health of the aged and mental health.

Students attending classes at the Technical College for Advanced Education and studying for the Diploma of Public Health visited the auditorium and were given a talk on health education and preventive medicine and were shown films on environmental pollution and the functions of this Department. Natal Provincial nurses, training as tutor sisters and matrons also attended for a similar programme.


LIFE IS GREAT
Who needs drugs ?
LIFE IS GREAT
LIFE IS GREAT
LIFE IS GREAT
LIFE IS GREAT
LIFE IS GREAT
LIFE IS GREAT
Who needs drugs ?
LIFE IS GREAT
LIFE IS GREAT
LIFE IS GREAT
LIFE IS GREAT

A party of boys selected from high schools in Natal and who were attending the annual "Rotary Camp" spent an afternoon in the Department to learn of the workings of a city health department. It is pleasing to record that this was regarded as one of their highlights during that week.

(b) Other Venues

The Deputy Medical Officer of Health addressed a Women's Group on the subject of the early detection of uterine cervical cancer. A film on the same subject was also shown to the group.

Five schools were visited, 16 mm films shown, and discussions held on problems of adolescence (for girls only), the smoking of cigarettes in relation to cancer, nutrition, bilharzia and environmental pollution. In addition a talk was given on the scope of preventive medicine.

Three training hospitals were visited on 21 occasions and student nurses shown slides on the functions of this Department and films covering the subjects of drug abuse, alcoholism, malaria, bilharzia, rabies, tuberculosis, nutrition, cancer in relation to smoking, the house-fly and the rat. Talks on the scope and span of preventive medicine were also given. In addition film and slide shows on health matters were presented to other institutions and societies, as well as Women's Institute groups.

The home for retired citizens at Bill Buchanan Park was visited and a film relating to the health of the more advanced citizens, especially rehabilitation following serious disability or a stroke, was shown and aroused much interest.

COLOURED COMMUNITY

Although for the greater part of the year the Coloured lecturer was studying for the Health Visitor's Diploma, this community was not neglected. Film shows and group talks were given and home visits made whenever possible.

The work is summarised as follows:-

(a) Film Shows

(1) Coloured Schools

Three schools were visited on two occasions and at one of them parents joined their children to view the films together.

Mothers and daughters were shown a film on the problems of adolescence, whilst the films shown to boys and girls covered the subjects of environmental pollution, insect pests and cleanliness in relation to disease.

(2) City Health Clinics

Groups at departmental clinics were visited and films on nutrition, family planning and the spread of disease were shown. All films were followed by a talk and discussion.

(3) Other Venues

Four women's groups were also organised and were shown films on family planning.

(b) Group Talks

Talks numbering 239 were given at three departmental clinics to waiting mothers on subjects ranging from family planning through nutrition to the spread of disease.

(c) Domiciliary Visits

In addition to group talks, 150 individual home visits were made and in the majority of cases family planning was the topic of conversation. These visits proved of great value and well worth carrying out when group facilities are not possible or available, particularly when dealing with small scattered population groups such as the Coloured community in Durban.

BANTU COMMUNITY

Work amongst this group was maintained at a high tempo and consisted of 16 mm film shows, slide presentations, group talks, talks from the loudspeaker van and house-to-house visits.

A set of colour slides with accompanying script in English and Zulu was produced on the subject of milk hygiene during the year.

Film Shows and Slide Presentations

Twenty two factories were visited during the luncheon interval and 38 film presentations given on family planning. All films shown were followed by a question and answer period. The commentary for the films was given in Zulu by the lecturer and was listened to with much interest by the audiences who in the main were males. This topic is a controversial subject in this section of the community and much perseverance is required.

Slide presentations (139) on infectious diseases, immunization and venereal disease were shown to waiting mothers at family health clinics.

Two of the largest pasteurising and bottling dairies in Durban were shown a specially prepared film slide series dealing with milk handling hygiene on five occasions. These slides were taken of employees in their different work situations in the dairy and depict the correct as against incorrect methods.

An adult women's group in Lamontville was visited on six occasions and shown films on family planning, disease and tuberculosis.

Talks from the Loudspeaker Van

This media of health education continued to be popular in the townships and always attracts a large audience who prove to be extremely attentive. In this way a total of 2 593 talks were given to people at their houses, in hostels and locations and in the industrial areas.

The subjects covered varied, depending upon any special need for a particular subject or advice to be given. Programmes dealt with included poliomyelitis, tuberculosis, nutrition, litter and hygiene, personal hygiene, insect pests and venereal disease.

Group Talks

The Bantu as a community are attracted by gatherings and,preferring talks and discussions, are always willing to listen to the lecturers who call them together for a short talk. Groups are formed in the townships, hostels, locations, at departmental clinics, beerhalls and eating houses, in the industrial areas and last but not least amongst those seeking work in Durban at the Bantu Administration Department. Talks were given on a variety of subjects such as poliomyelitis, tuberculosis, bilharzia, venereal disease, smallpox, gastro-enteritis, nutrition, food handling hygiene, general and personal hygiene, carcinoma, littering, road safety, child care and family planning.

One of the largest hotels in Durban was visited on two occasions when special talks on food handling were given to the waiters and kitchen staff. Group talks have formed the largest part of the work, a total of 6 803 being delivered in all.

Domiciliary Visits

Lecturers continued to support the anti-poliomyelitis campaign by accompanying the immunization van and visiting families in the area to check on the state of immunization of children. Other visits were also paid in connection

with special problems concerning tuberculosis, cancer, mental health, venereal disease, nutrition, general hygiene, child care and family planning. A total of 4 219 such domiciliary visits were carried out.

All Non-White staff of the Department attended a film in the auditorium on the subject of cancer.

A small survey was carried out amongst families in kwaMashu during the poliomyelitis immunization programme from the mobile van to ascertain the immunization status of pre-school children. All houses in one area were visited and those where children were found with responsible parents or guardians investigated. One hundred and fourteen houses were visited, 26 were locked, no children were present in 16 and seven children were found but both parents were absent at work. The remaining 65 houses provided a total of 126 children of whom five had received no immunization whatsoever and 16 had only received a first or second dose.

INDIAN COMMUNITY

The Chatsworth Township continued to grow and with many more families from poorer areas being re-housed here, much advice in regard to cleanliness and general hygiene was required. Most health education work is performed in Chatsworth although other much smaller areas such as Kharwastan, Umhlatuzana, Welbedacht, Springfield, Sydenham, Clare Estate, Sea Cow Lake, Greenwood Park, Newlands, Overport and Reservoir Hills were not neglected. Where possible factory staff were also assembled during lunch breaks for talks and film shows.

Film Shows

At 34 schools, 103 film shows were given on general hygiene, the louse, insect pests and tuberculosis, followed in each case by a question and answer period.

Factories were visited during lunch hour breaks on 15 occasions when films on the louse and family planning were shown and discussed.

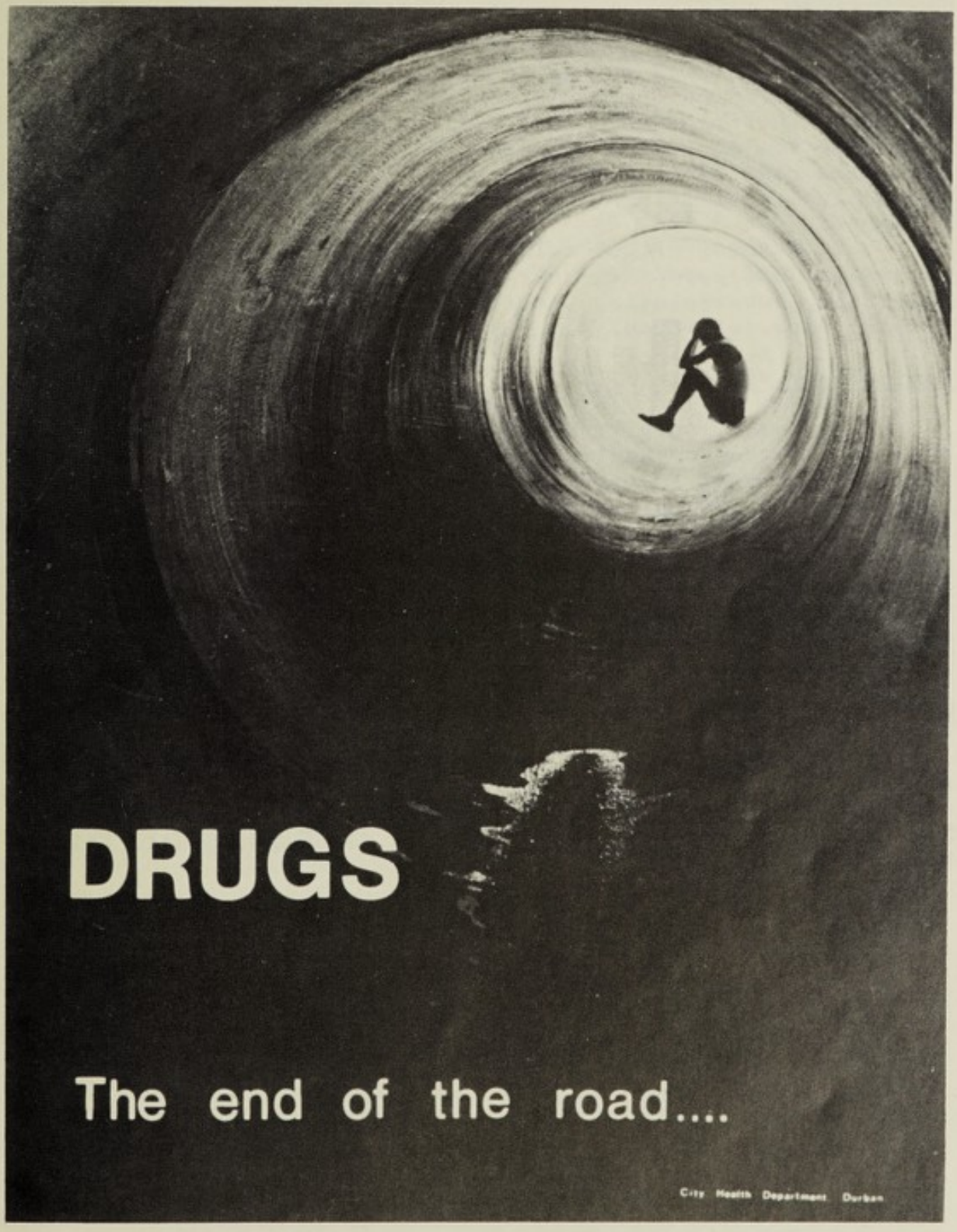
Family health clinics at Chatsworth, Merebank, Clairwood and Lancers Road were visited on 89 occasions and films on tuberculosis, nutrition and family planning shown to waiting mothers.

The Springfield Tin Town shacks were visited on five occasions and films dealing with family planning, general hygiene and nutrition were shown to residents.

On two occasions groups were drawn together by the Indian Benevolent Society at Chatsworth and were shown films on alcohol, drugs and nutrition.

Talks from the Loudspeaker Van

Nine hundred and fifteen talks were given from the van to families in all areas of Indian housing. The talks were well received and public co-operation appeared to be


DRUGS
The end of the road....
City Health Department Durban

improving. Three subjects were covered by this means, all of them considered important in the local field, namely, tuberculosis, immunization and the topical problem of litter which is linked to hygiene generally.

Group Talks

This is a popular medium for health education at departmental clinics and the majority of the group talks and discussions have taken place at these venues. A small number of factories were also visited during the lunch intervals and employees addressed by lecturers in the canteens and rest rooms. Other group talks were given at two public institutions.

A total of 967 talks covering family planning, ante-natal and post-natal care, child care, general hygiene, nutrition, tuberculosis, venereal disease and the spread of disease were delivered.

Domiciliary Visits

Domiciliary visiting continued to be a popular and effective method of health education and as there is usually a large family unit in each house as well as in-laws and others, large numbers can be reached in this way.

A total of 18 418 visits were made to houses in all Indian areas and subjects covered in this way were immunization, poliomyelitis, family planning, child care, tuberculosis, general hygiene and the litter problem.

GENERAL.

Several films of public health interest were previewed with a view to purchase but only one on the subject of nutrition for the Bantu was suitable as an educational aid and was subsequently purchased for the Department's film library.

## VIII. HEALTH INSPECTION

The grave shortage of qualified personnel reported last year continued to deteriorate and at the year's end the effective establishment was short of 16 posts of White Health Inspector and one of Bantu. Obviously for years past no new posts of White Health Inspector have been motivated as it would be an exercise in futility to create more vacancies. Thus the establishment is not keeping pace with the growth rate of the City and should the position change, a number of posts of Health Inspector will have to be established. The chronic shortage brings in its train a further difficulty in that no manpower is available to teach any new juniors of any race group. Serious consideration will therefore have to be given in the forthcoming year to the adoption of measures to reverse the trend or to introduce alternative means to alleviate the shortfall.

### COMPLAINTS

The Department received 2 956 (3 019) complaints, excluding those respecting pests, during the year. These complaints are analysed as follows:-

| | | | |
|---|---|---|---|
| Animal Keeping | 25 | Poultry Keeping | 71 |
| Conservancy Services | 40 | Refuse Dumping | 386 |
| Drainage - Appurtenances | 69 | Refuse Removals | 45 |
| - Defects | 384 | Sanitary Accommodation | 92 |
| Food - Unhygienic Handling | 34 | Shacks (Illegal) | 12 |
| - Unsound | 50 | Smoke/Air Pollution | 5 |
| Housing - Illegal | 20 | Structural Defects | 123 |
| - Overcrowding | 40 | Uncleanliness of premises | 529 |
| Miscellaneous | 61 | Vacant Land | 733 |
| Offensive Smells | 233 | Ventilation | 4 |

All these reported nuisances were promptly investigated and appropriate action taken.

INSPECTIONS

Visits carried out to all classes of premises by the Health Inspectorate and ancilliary personnel are summarised hereunder :-

Food Handling Premises

| | |
|---|---|
| Bakeries | 324 |
| Boarding Houses/ Private Hotels | 984 |
| Butcheries | 3 204 |
| Dairies (mainly ex-City) | 3 837 |
| Food Manufactories | 582 |
| General/Fresh Produce Dealers | 10 955 |
| Hotels (Liquor Licensed) | 1 009 |
| Milk Bars | 38 |
| Offensive Trades | 49 |
| Restaurants/Eating Houses | 7 418 |
| Tea Rooms | 1 601 |
| Sundry | 1 919 |

Other Premises

| | |
|---|---|
| Barracks/Compounds | 2 837 |
| Dwellings | 87 310 |
| General Dealers | 4 487 |
| Hairdressers | 746 |
| Laundries/Dry Cleaners and Depots | 620 |
| Lodging Houses/Flats | 9 817 |
| Offensive Trades | 583 |
| Sundry - Trading | 11 246 |
| - Non-Trading | 41 481 |

Arising from these inspections, which totalled 191 047 (186 974), the following action was taken :-

| | |
|---|---|
| Personal notices issued at time of inspection ..... | 13 578 |
| Statutory notices served ..... | 2 680 |
| Letters written ..... | 1 282 |
| Prosecutions instituted (counts).... | 188 |

It is of major significance that a fall off in inspections, notwithstanding the tremendous growth of the City, has been alarming despite the most strenuous efforts of the staff, as reflected below :-

| Year | Total Inspections | Personal Notices | Statutory Notices | Letters Written | Prosecutions (Counts) |
|---|---|---|---|---|---|
| 1968 | 227 395 | 15 940 | 2 845 | 1 747 | 198 |
| 1972 | 191 047 | 13 578 | 2 680 | 1 282 | 188 |

LICENSING/REGISTRATION

(a) Trade Licence Applications

Reports on public health implications, respecting the state of premises and trades to be conducted therein, were submitted in connection with 2 988 new applications lodged with the City Licensing Officer. In certain instances there were departmental requirements or bylaw shortcomings to be complied with requiring re-inspection. As a result, 1 156 "further reports" were submitted.

(b) Bantu Licence Applications (Housing)

During the current year the Director of Bantu Administration referred five applications for permission to house Bantu non-domestics, in terms of the Regulations under the Bantu (Urban Areas) Consolidation Act, No. 25 of 1945. Wherever the conditions were satisfactory, favourable reports were made.

(c) Animal Keeping Permits

Permits totalling 27 for the keeping of animals were issued in terms of the Public Health Bylaws during the year, 25 being renewals and two being new permits. The number of animals registered were as follows:-

393 equines
13 sheep
286 dogs (in kennels - animals kept for reward)
20 cats (in kennels - animals kept for reward)
6 bovines
44 goats
400 pigs

(d) Food Vending Vehicles/Machines

Registration under the Food Bylaws was granted for the following :-

| | | |
|---|---|---|
| (i) | Mobile soft dairy mix dispensers | 15 |
| (ii) | Food Conveyance vehicles | 850 |
| (iii) | Hawkers' and pedlars' carts | 148 |
| (iv) | Food Vending Machines: Seven certificates were issued during the year of which four were renewals. These coin-operated machines vend hot and cold food including sandwiches. The registration of hot and cold drink machines was relaxed to some extent during the year by not deeming the dry ingredients utilised in these machines as falling within the category of perishable foods. | |

(e) Modification of Food Bylaw Requirements

In accordance with powers contained in the Food Bylaws, the City Medical Officer of Health granted 36 certificates authorising the relaxation of minimum requirements, mainly respecting storage areas (29).

(f) Dry Cleaners/Laundry Vehicles

Eighteen certificates of registration were issued during the year.

(g) Fumigators

Ten certificates were issued regarding new applications.

(h) Mattress Makers/Upholsterers

Forty eight certificates in terms of the Mattress Makers and Upholsterers were issued, 41 being renewals and seven being in respect of new trade licences.

(i) Offensive Trades

The number of trades registered amounted to 131 of which 64 were operating under unlimited time periods and 67 were for a restricted term. The latter figure included the following new applications:-

| | |
|---|---|
| Paint/Varnish Works ..... | 1 |
| Chemical Works ..... | 3 |
| Processing Products of Petroleum Refining.... | 2 |

(j) Swimming Pools

Samples of swimming water were taken from 62 baths used by the public, for example at hotels and clubs, and any unsatisfactory results were drawn to the attention of the management or controlling body of the organisation.

BEACH HYGIENE

(a) Bantu Beach : Snell Parade

During the school holidays the increased patronage of this beach again required the provision of temporary toilet accommodation to supplement existing facilities. Plans for waterborne sewerage have now been prepared for the construction of permanent facilities for the public.

(b) Public Toilets : Northern Beaches

The six blocks of toilets at Rocket Beach, Beachwood and Virginia Beaches were boarded-up by the City Engineer's Department as they were being damaged by vagrants.

Consequently these beaches became heavily fouled. Following representations from this Department, the toilets were renovated and opened during daylight hours when an attendant was present. The fouling of the beach ceased.

(c) Virginia Beach

Samples of water taken regularly from the stormwater drain which discharges into the sea at the rear of Virginia Airport revealed on examination a high acid content, as a result of which officials of the City Engineer's Department inspected 38 dwellings in the Virginia area. It was found that at 21 of these premises the sewerage was defective resulting in effluent flowing into the stormwater system. Remedial measures were implemented.

LARGE-SCALE GATHERINGS

(a) Kings Park Rugby Stadium

The sanitation at this large stadium has now been improved to acceptable standards following the construction of additional water closet accommodation for female spectators, so eliminating the use of primitive temporary toilets.

These facilities were available for the representative match against an English XV in May, 1972.

(b) Greyville Racecourse

Work on the construction of a new members' stand embodying catering facilities and ablution blocks neared completion and will cater for the increasing crowds attending race meetings during the popular winter season.

ILLEGAL TRADING

Throughout the year these activities, with particular reference to the areas in and around the Indian Market, the Victoria Street bridge and the Central bus rank have continued unabated, and have included the cooking and sale of meat and mealies, in addition to fruit, vegetables and other commodities.

These illicit sales have continued despite punitive measures directed at the offenders by the City Police authorities and especially the South African Police. Identification of the offenders is often most difficult as juveniles are employed to carry out the actual selling whilst the adults circulate in cars continually replenishing the stocks, kept in case of police seizure.

The litter resulting from these activities has been the subject of many complaints submitted both by

private individuals and public bodies. Public cleansing services in this area are carried out daily by the City Engineer's Department but no lasting impression is made.

During the period 15th - 19th May, 1972, an anti-litter campaign was instituted and for the duration of this spot checks revealed that public co-operation and participation in the campaign resulted in a marked improvement in the cleanliness of streets. This was particularly apparent in the Victoria Street/Indian Market area. Unfortunately observations subsequently confirmed that, without a specific drive and watching brief conditions rapidly revert to a pre-campaign state. This was particularly noticeable in the Warwick Avenue/Victoria Street areas and as in the past, the underlying cause is undoubtedly the activities of the illegal hawkers and pedlars.

Illegal offal sellers continued to trade in the Dalton Road area and it was necessary on several occasions to request the South African Police to resume their raids in order to eliminate this practice.

Bantu females were observed near a large African compound in the North Coast Road area cooking and selling foodstuffs (meat and mealies). This matter was referred to the Licensing Department for investigation and to the South African Police, who carried out periodic raids.

NUISANCES

(a) Smells

A grain drying firm established for many years in the Williams Road area was a continual source of complaint due to the smell emanating from this trade. The firm has now moved out of the City.

(b) Dust

Considerable inconvenience was caused by two major reclamation and development works being carried out on either side of an arterial road leading to a residential suburb.

In the one instance, development of the Bayhead marshalling yards resulted in fly-ash being blown across the road by the north easterly winds, causing annoyance to and contamination of several industrial establishments, including a mineral water works. Representations to the South African Railways resulted in the contractors being required to dampen down the ash as much as possible. However, this is not always effective.

In the other instance, dust was being blown off the site being reclaimed for the new bulk market by south westerly winds. Some control of this nuisance was effected by spraying the surface with a bitumen solution.

(c) Fumes

As a result of complaints received, evening inspections substantiated that a large asphalt firm was operating a mobile mixing machine on a vacant site at the rear of a licensed hotel. The nuisance was due to the over-heating of the "kettle" which caused the contents to fume. Appropriate action was taken against the offender.

(d) Hazardous Substances

An episode which gave cause for concern was the combustion of a chemical and the escape of noxious gas occurring in residential premises in the City arising from the storage of swimming pool additives in commercial quantities. The chemical marketed by the company and stored on the premises was calcium hypochlorite in granular form, having a 70% available chlorine content, and comprised a consignment of 25 - 30 drums delivered 30 minutes prior to the explosion and fire. This coincides with the theory that rough handling, sudden change of temperature and leakage occurring with this formulation can be hazardous. Also, the storage of hydrochloric acid, usually used at a concentration of 30% to maintain ph balance in a swimming pool, is highly dangerous when kept in close proximity to calcium hypochlorite as mixture of these two substances induces violent combustion.

It is a matter for anxiety that a large number of retail outlets and wholesalers stock these chemicals in quantity without due regard for the potential dangers which exist in the absence of effective safeguards, and it is with a sense of relief from the public health viewpoint that State legislation is pending to regulate the storage of hazardous substances.

WATER POLLUTION

Several instances were noted in the harbour area where spillage was occurring during off-loading of powdered chemicals by overfilled or defective grabs. This was aggravated by the lack of sails being spread across the space between ship and wharf. The matter was referred to the harbour authorities who served notices on the offending stevedoring firms, following which improvement was evident.

During the year, numerous sewer surcharges occurred in the valley between Lamontville and Mobeni Heights which flowed into streams feeding an industrial water storage dam. As this water is used for the dilution of molasses prior to

distillation, this Department required the concern to install a chlorinator to ensure a safe water supply.

Durban Corporation water supply is now employed for the irrigation of the Greyville race track and enclosed Royal Durban Golf Course. This welcome improvement has obviated the draining of water from the open concrete polluted stormwater drain previously used for this purpose.

REFUSE

(a) Collection

During the year the City Engineer extended the experimental use of plastic bag liners supplied to householders for insertion in their bins and proved that many advantages accrue from adoption of this modern system. By the year end a number of suburbs were served in this way including the European area of Durban North and the Indian area of Reservoir Hills.

(b) Tipping

The Lamont site was a source of concern to the Department during the year due to the apparent lack of control over scavengers, inadequate spoil coverage, adult fly nuisance, ineffective compaction and constant tip combustion. The matter was pursued with the City Engineer who has the problems well in hand.

(c) Dumping

Continued efforts were made to control this nuisance and, whilst some degree of success was achieved through prosecution, these activities were transferred to other localities. The appointment of the pollution abatement officers in the City Engineer's Department should help considerably in controlling this nuisance.

DERELICT VEHICLES

Difficulty is being experienced in controlling the increasing nuisance and unsightliness of wrecked or scrapped motor vehicles deposited on road verges and vacant land. In most cases no nuisance can be established which would justify action being taken under health legislation and it would seem that measures will have to be taken by other departments on the grounds of unsightliness.

DEMOLITIONS

During the course of the year under review, several well-known Durban landmarks were demolished, and scheduled to be replaced by multi-storied complexes of modern design.

Typical examples of these buildings were Dickens Chambers, Britannia and C.T.C. Buildings, and Yorkshire House.

CARAVAN PARK

Following reports received, inspection of the park in the northern area revealed the existence of unclean conditions and fly breeding. A prosecution was accordingly instituted against the owners who paid an admission of guilt.

During the December seasonal influx of visitors this camp was filled to capacity when it was observed that the water supply was inadequate in the ablutions. On instructions from this Department the supply was increased and the position rendered satisfactory.

EXHUMATIONS

In order to provide a clear corridor for the erection of the proposed freeway over-pass, it was necessary to carry out exhumations of long-interred remains in the West Street Cemetery. All exhumations and re-interrments carried out at intervals throughout the year were performed by a licensed undertaker under the supervision of this Department.

CHATSWORTH INDIAN TOWNSHIP

This large housing scheme located in the south western extremity of the City currently has an estimated population of 130 300, and environmental health control is supervised by a White Senior Health Inspector assisted by five Indian Health Inspectors and ancilliary personnel of the same ethnic group. Complaints received from residents and investigated by the health inspectorate operating from departmental offices in the area totalled 156. The most significant causes for complaint, included in the main table in this chapter, were overgrown land (58), poultry keeping(19), drainage defects (17), mosquito breeding (15), illegal dumping of refuse (14) and rodent infestation (13). Six prosecutions were successfully finalised during the year.

Following a survey of all watercourses during the latter part of 1971, and subsequent reference to the City Engineer's Department of all cases where sewer surcharges were the cause of pollution, improvements to sewer capacity were effected and these measures successfully eliminated all main sources of pollution. During this year additional piping was laid in the Umlaas Reserve and certain other areas and a sewage holding tank in Road 706, previously giving rise to complaints, was by-passed and closed.

As a result of a complaint from the Southern Indian Local Affairs Committee, an inspection was made of the temporary sewerage works in Collier Avenue, at which time it was confirmed that a health nuisance was presented by the

continuation of this system. The City Engineer was requested to give consideration to the early discontinuation of these works.

In view of nuisances arising from refuse storage and other unsatisfactory conditions at the shopping centres serving Units 3, 4 and 5, a joint inspection was carried out with officials of the Department of Community Development, the authority responsible for the provision of stores, with a view to extra facilities being arranged. Furthermore, attention was drawn to the need for wash-hand basins within the shops, and the implementation of certain rodent-proofing measures.

. The problem of vandalism at these complexes has been discussed with the responsible South African Police officer who indicated that surveillance would be arranged.

There is a general lack of shopping facilities in certain areas of Chatsworth there still being practically no retail outlets in Units 1, 6, 7, 8, 9 and 11. This shortcoming tends to encourage illegal trading from private dwellings and hawking from vehicles, with consequential food-handling risks.

During the year, 16 dwellings, containing 152 persons, on the Witteklip Farm, were surveyed. There is no Municipal water supply to the premises. Samples of water were taken from each of 13 wells serving the shacks and bacteriological examination showed that, in seven instances, the water was unfit for drinking purposes due to contamination. These shacks were listed for consideration of action under the Slums Act.

Public facilities for controlled dumping were recommended for the Chatsworth area and a tentative selection of four convenient areas was referred to the City Engineer for consideration.

General unsatisfactory conditions, concerning yard sanitation mainly, justified all available staff being diverted to house-to-house surveys in Units 2, 3 and 5. Detailed inspections were made, and advice or instructions, verbal or written as circumstances warranted, were given on all aspects of domestic hygiene.

NEWLANDS AND SEA COW LAKE INDIAN AREAS

Two food shops at Newlands were completely gutted by fire whereupon the licensees immediately commenced trading from a garage. Action was taken forthwith to ensure that this practice was discontinued, and the foodstuffs involved removed to the refuse tip so as to prevent any nuisances or

likely danger to health. These shops were subsequently rebuilt and (with new fittings) constitute an improvement over the old ones which were in existence before incorporation of the area into Durban some years ago.

Two dwellings situated on premises in Sea Cow Lake Road were destroyed by fire on the 4th March, 1972, resulting in five Indian families being rendered homeless. The main building which comprised nine rooms was part of a building constructed of bricks, wood and iron. The victims of the fire subsequently erected a two-roomed wood and iron structure, with the permission of the City Engineer, for their occupation and they also occupied a double garage.

A private township for an Indian Charity Trust was partly developed during the year with sewage and storm-water drainage laid and road constructed. The township makes provision for 82 building and flat sites.

An Indian restaurant was opened in Donkin Road and included facilities for a restaurant (liquor licence), off-sales outlet and public entertainment.

A factory was opened in Peter Road for processing cooking oil and oil cake from ground nuts and sunflower seeds.

The Durban Indian Child Welfare Society completed and occupied a new cottage at Centre Road at the Lakehaven Homes complex to house 16 orphans or children admitted from broken homes.

KWAMASHU

This large Bantu township situate to the north of Durban houses a population of approximately 116 400 persons, mainly of the Zulu ethnic group, in individual houses and single quarters for males. The Department's staff in the area comprises two Bantu Health Inspectors and ancilliary personnel under the part-time supervision of a White Senior Health Inspector.

Numerous sewer surcharges or blockages were reported and attended to by the township authorities.

A conference was held at the St. John's Apostolic Faith Mission Church from 29th March, 1972 to 2nd April, 1972. The average daily attendance was approximately 1 000 in a marquee. A travelling amusement show occupied an area in the township centre for three weeks in July. Extra night soil buckets were arranged as well as a refuse removal service.

A new cemetery in F. Unit was opened on 10th June, 1972 for the sole use of local residents.

The area surrounding K. Unit shopping centre was hardened and extra refuse bins provided at this Department's request.

UMLAZI-GLEBE

During the year, several projects were undertaken in this Bantu Township, as follows:-

(1) General clearing of overgrowth and refuse throughout the area;

(2) permanent fly trapping;

(3) a large scale anti-rodent campaign;

(4) the erection of 120 pail privies in addition to the existing pit privies;

(5) the demolition of 117 houses to make way for six hostels which were started. These hostel blocks will be connected to water-borne sewerage.

In all, this is a major step forward towards the improvement of this area.

FOOD HYGIENE

FOOD INSPECTION

In terms of the Regulations relating to Food Inspection framed under the Public Health Act, 1919, large quantities of foodstuffs were inspected and seized by the Health Inspectorate on the grounds of unfitness for human consumption or voluntarily surrendered by the owners for the same reason. Together with daily examinations of produce arriving at the City Market in a deteriorated or contaminated condition considerable quantities of foodstuffs were condemned and destroyed as the following figures indicate :-

City Markets:

| | |
|---|---|
| 8 890 bags/ pockets | Potatoes, cucumbers, green peas, green beans, onions, chillies, cabbages, carrots, green mealies, squash, cauliflowers, bringals, mangoes and oranges. |
| 9 257 trays, boxes, crates or cartons | Tomatoes, lettuce, green peppers, marrows, cucumbers, pineapples, mangoes, peaches, litchies, spanspek, plums, grapes, lemons, prickly pears, avocado pears, paw-paws, pears, apples and melons. |

Other Traders

| | | |
|---|---|---|
| 100 948 | tins, jars or packets | Fish, meat, jam, fruit, vegetables, soup, cereals, nuts, noodles, spaghetti, beans, etc. |
| 7 228 | packets or cartons | Frozen fish, seafoods and poultry |
| 1 013 | kg | Meat and frozen vegetables |
| 346 | litres | Ice-cream |

Other commodities included 1 099 kg cheese, 440 kg salted snoek, 1 800 kg dried figs and 497 chickens which, on arrival in Durban from a cold storage depot in the country, were found to be unsound.

Reasons for condemnation included "blown", rusted or leaking tins, broken or leaking bottles, cereals infected with weevils, spaghetti and beans and other commodities as well as maggoty salted snoek and mouldy cheese.

Refrigeration breakdowns at supermarkets, shops and wholesalers accounted for the condemnation of the majority of the frozen commodities, whilst a fire in a warehouse required the seizure of 4 602 tins of meat. Whilst the latter food was unfit for human consumption it was considered satisfactory for animals and, accordingly, the whole amount was released to the S.P.C.A.

FOOD SAMPLING

(i) Chemical Analyses

In accordance with routine procedure under the Food, Drugs and Disinfectants Act, 1929, or Regulations framed thereunder, 385 food samples, excluding milk and milk products referred to in Chapter X, were submitted for analysis by the State Chemical Laboratories in Pretoria. The following indicates the range of commodities sampled:-

| | | | |
|---|---|---|---|
| Colouring matter | 7 | Meat - minced | 72 |
| Condiments/sauces | 30 | polonies | 17 |
| Cooking oil | 7 | processed | 7 |
| Cordials/squashes | 7 | sausages | 97 |
| Curry/chilli powders | 12 | Powders, various food | 22 |
| Fish Preparations | 10 | | |
| Jams/preserves | 24 | Vinegar | 10 |
| Mayonnaise | 10 | | |

Of the aforesaid samples, 19 were found to be unsatisfactory, viz:-

| | | | |
|---|---|---|---|
| Bovril | 1 | Meat - minced | 5 |
| Chutney (tomato) | 1 | polonies | 1 |
| Coconut (dessicated) | 1 | sausages | 4 |
| Colouring Matter | 2 | Spread (Chicken/Ham) | 1 |
| Cordials, Squashes | 2 | Vinegar | 1 |

Legal proceedings were instituted in 9 instances and fines to the sum of R240 accrued. Appropriate action in the form of advising other local authorities and Government departments was taken in respect of the other samples.

(ii) Bacteriological Examinations

The Food Bylaws require that ready-to-eat foodstuffs comply with certain bacteriological standards and consequently periodic sampling of these commodities was carried out. Special attention was paid to products from premises where the food hygiene was suspect, and at businesses such as meat factories where the results of the examinations gave an indication of the efficiency or otherwise of their various food handling activities, the sanitisation of machinery and equipment, and personal hygiene.

During the year 46 samples were purchased from food manufactories and retailers or voluntarily sent to the department for examination. Wherever undesirable contaminants were found the licensees were warned to pay meticulous attention to corrective measures and in due course, and particularly where it was obvious that little effort had been made to improve matters, samples were taken, for submission to the Council's Consultant Pathologist for examination. Legal proceedings were instituted in one instance where such samples were proved to be in conflict with the Food Bylaw standards.

FOOD COMPLAINTS

A number of allegations respecting food on sale to the public were received during the year, the two most notable being :-

An article in the press reported that a member of the staff of a local hospital had purchased a pie from the hospital tuck shop and that the pie contained a rat. Investigations disclosed that what was alleged to be a rat was in fact a portion of mutton with a piece of skin and wool from the shin area attached to it.

A member of the public submitted pieces of cooked chicken which he had purchased a few minutes before at a local restaurant. These segments were smelling offensively and obviously in the early stages of decomposition, and when the establishment concerned was inspected a quantity of cooked chicken pieces on display were found to be in the same condition.

Other complaints received and investigated included a loaf of mouldy bread, factory wrapped, which had apparently had the date stamp removed from it before being sold. In another instance a mouldy pie, from which the packing date had been removed, was sold to a member of the public.

Enquiry into a complaint regarding glass fragments in a bottle of tomato juice found the problem to have been inadvertently caused at the factory by glass remaining in the capping machine after a breakage, and then forced into the following bottle on the line.

Appropriate action was taken in all instances.

FOOD AND WATER VESSELS

In August the Regional Director, State Health Services: Natal, reported that earthenware crockery such as plates, salad dishes, water jugs and the like manufactured by a firm in the Cape Province contained lead in excess of that permitted by regulation under the Public Health Act, 1919. Investigations failed to trace the presence of these products in the City.

CHEMICAL POLLUTION OF VEGETABLES

Investigations into the possible contamination of vegetables by chrome waste disclosed evidence of this chemical in root vegetables obtained from a variety of widespread sources. Further investigation disclosed that in most instances wood shavings were used as humus and that these could have been subject to some form of chemical treatment. The chemicals used for treatment contain compounds of chrome. However, it has not as yet been established if the percentage of chrome in the vegetables could be detrimental to health.

SURVEY OF FOOD PREMISES

As in the past a planned survey of food handling establishments was maintained during the year, with particular attention being paid to hygiene standards, standards of furnishings and equipment and structural conditions of the premises. Particulars of the survey were as follows:-

| Establishment | Premises | Inspections | Notices Served |
|---|---|---|---|
| Butcheries | 261 | 1 672 | 339 |
| Restaurants | 453 | 2 581 | 568 |
| Liquor Licensed | 123 | 509 | 150 |
| Food Factories | 99 | 376 | 58 |
| Boarding Houses, etc. | 187 | 566 | 138 |
| Total | 1 123 | 5 704 | 1 253 |

Visits were regularly made in the evenings to food handling establishments such as hotels and restaurants to check on food preparation practices, and also in the early mornings to check on food deliveries from the manufacturers to retail food shops.

## AMENDMENT OF FOOD BYLAWS

The bylaws were adopted in 1950 and since then an occasional amendment has been effected to meet a particular circumstance which necessitated revision. With the effluxion of time, however, certain deficiencies in the Department's legal powers had come to attention, highlighted by factors such as new developments in food marketing. Amendments were recommended and were subsequently gazetted in Provincial Notice 405 dated 31st August, 1972, to cover, inter alia, minimum sizes for sculleries, registration of vehicles used for the sale of perishable food, improved facilities for personnel and to clarify certain other requirements to avoid misinterpretation.

## BEACH CATERING

The question of replacing the inadequate beach front restaurants with premises of suitable size and design has not yet been resolved despite discussion on this matter during the year. The continued existence of these inadequate facilities remains a matter of concern to the Department particularly at holiday periods when resources are stretched to the limit and food hygiene may lapse in consequence.

In January a Council-owned, privately occupied restaurant situated at the North Beach was gutted by fire. These premises, which were due for demolition, were old and did not measure up to the present day standards required of food premises of this nature.

## PUBLIC GATHERINGS

Events such as the Durban July Handicap at Greyville and the German Beer Garden Festival held at the Amphitheatre attracted a considerable number of people, and vast quantities of food were consumed. Health Inspectors were on duty checking on food hygiene and general sanitation but no problems were encountered.

## FOOD PREMISES

Objection was lodged with the Licensing Officer against the renewal of trading licences for 1973 in respect of a firm of peanut roasters and toffee boilers due mainly to the unsuitability of the premises. This step had to be taken because the usual departmental representations for improvement had proved fruitless.

Extensions to a national supermarket were commenced as a direct result of pressure by this department. Such extensions/alterations included additional staff facilities, storage accommodation and better food handling facilities in the delicatessen and butchery departments. Although at the time of inception the shop was adequate, the volume of trading had developed to such an extent that major additions were necessary.

A large well-fitted "centralised" kitchen was opened in Briardene which supplies a chain of "burger ranch" type restaurants dispersed throughout the City.

## BUILDING CONTROL

This section comprises a Senior Health Inspector and a Health Inspector (Plans) and is concerned with the following aspects of environmental health administration:-

(1) the examination of building plan applications referred by the City Engineer, and inspection of building projects;

(2) liaison with the health inspectorate, other Council departments, owners, architects, etc. relative to health requirements involved in major building developments;

(3) inspection of buildings in order to assess the efficiency of mechanical ventilation and artificial lighting where a relaxation of natural means has been granted in terms of the Building Bylaws;

(4) liaison with other departments regarding the co-ordination of health aspects in the amendment of existing bylaws and the introduction of new legislation;

(5) town planning implications.

## BUILDING PLANS

During the period under review building plans totalling 5 038 (4 961), having an estimated value in excess of R91 million (R128 million) were received from the City Engineer for scrutiny from a public health point of view and of these 1 265 (1 281) necessitated the submission of a conditional report. In addition, a further 457 (539) plans were returned to this Department for clearance or further report, thus a total of 5 495 (6 500) plans were dealt with altogether.

Particulars respecting the plans dealt with, excluding housing development which is reflected in

Chapter IX, are as follows:-

| | Accommodation | Plans | Estimated Cost R |
|---|---|---|---|
| 1. | New Construction | | |
| | Commercial and industrial | 92 | 38 091 300 |
| | State and municipal | 13 | - |
| | Other | 19 | 793 800 |
| 2. | Additions | | |
| | Non-residential | 970 | 11 181 100 |
| | State and municipal | 31 | 109 600 |
| | Total | 1 125 | 50 175 800 |

ARTIFICIAL LIGHTING AND VENTILATION

In terms of Section 127 of the Building Bylaws, the City Engineer may consent to the relaxation of certain standards of natural ventilation and lighting, laid down in Sections 126 and 129 thereof, but before doing so requests comment on the public health implications. These applications, fully motivated by the applicants, require careful study and often joint consultation with the parties concerned to ensure the incorporation of adequate safeguards.

During 1972 a total of 36 such applications were received and, after being carefully considered, the acceptance of 33 of these was recommended to the City Engineer, the remaining three being refused for various reasons.

One of these applications was in respect of a restaurant situated on the top floor of a proposed high-rise building on the Victoria Embankment and the applicant's motivation for a total absence of opening windows was that high wind pressures and water-proofing were insurmountable problems. However, discussions with the National Building Research Institute and the University of Natal confirmed that purpose-designed windows were available for circumstances such as these and accordingly this particular application was not approved.

WINDOWLESS PUBLIC BUILDINGS

The investigation of a complaint regarding the lack of airconditioning at a Central City cinema disclosed that unsatisfactory conditions had arisen, in this instance due to the ignorance of the method of operation of the plant and in the absence of the manager. It was also discovered that adequate standby facilities were not available. The unsatisfactory conditions were rectified without undue delay.

A similar investigation by the Department confirmed that an airconditioning plant at a suburban cinema was shut-off during the cold weather spells resulting in an absence of ventilation and conditions becoming uncomfortable. The management was warned to cease this practice.

STATE REGISTERED INSTITUTIONS

Numerous requests were received during the year for inspection and evaluation of premises to determine their suitability for the establishment of play centres, crêches and homes for the aged as a prerequisite to registration in terms of State legislation. On being apprised of the various essential minimum requirements and standards for such institutions the majority of applicants withdrew. Nevertheless a total of eight creches/play centres and two homes for the aged were approved from the public health standpoint.

MUNICIPAL LEASES

The City Valuator and Estates Manager is informed of the public health implications associated with the leasing, alienation, short term tenancy or sale of Council-owned land or buildings, and advised as to the need for incorporating precautionary clauses in the tender documents, conditions of lease etc. to avoid nuisances arising from the intended use. During the year subjects dealt with included proposals respecting the lease of the City Baths and Medwood Gardens Restaurant, a restaurant at the Japanese Gardens, a pantechnicon park off Higginson Highway, a Caravan Park at van Riebeeck Park, and various land acquisitions for the open space zoning.

RELAXATION OF BYLAWS

Following upon initiative taken by this Department the Local Government Ordinance was amended on 24th August, 1972 (Proclamation 148) by the insertion of Section 245A concerning the power of a local authority, with the consent of the Administrator, to relax or dispense with compliance with the requirements of the building bylaws. This authority was sought to permit approval of, for example, a prestige high-rise development incorporating a revolving restaurant with a centre-core kitchen. Obviously this power will only be exercised infrequently and when considered absolutely essential to avoid disapproval of acceptable modern concepts in building design which nevertheless are not in full accord with certain orthodox standards.

PEST CONTROL

A good standard of work was maintained throughout the year by the Field Hygiene Section in spite of numerous changes of White staff which unfortunately had an adverse

effect on productivity as much time was lost in the training of new employees. This works branch is responsible for controlling pests which are of any public health significance on Municipal property, and a considerable amount of labour is devoted to effecting remedial measures on privately-owned premises in default of notices served in respect of bush clearing and the abatement of mosquito, fly and rodent nuisances.

Staff

The staff has grown over the years to the level shown in the undermentioned establishment, which includes rodent control personnel permanently seconded to the Health Inspection Section.

Whites:

| | | |
|---|---|---|
| Senior Health Inspector | 1 | |
| Supervisor | 1 | |
| Senior General Assistant | 1 | |
| Laboratory Assistant (Entomology) | 1 | (*) |
| General Assistant (Rodents) | 7 | |
| General Assistant (Field Services) | 7 | |
| | 18 | |

Indians:

| | | |
|---|---|---|
| Overseer | 1 | |
| Spotter (Mosquito) | 3 | |
| Assistant (Rodent) | 5 | |
| Assistant (Field Services) | 2 | |
| Labourer | 12 | |
| | 23 | |

Bantu:

| | | |
|---|---|---|
| Overseer | 4 | (*3) |
| Health Assistant (Clerk) | 1 | |
| Spotter (Mosquito) | 10 | |
| Labourer | 108 | (*24) |
| | 123 | |

Total: 164 * Additional posts

In my report last year it was recorded that the Department had been fortunate in acquiring the short-term services of Dr. R.C. Muirhead-Thomson, an entomologist of world repute, and this engagement revealed certain organisational limitations in the sphere of public health pest control. In order to ensure that the benefits gained by his work were not lost it was decided to create the post of Laboratory Assistant (Entomology) as it was felt that a fully qualified entomologist was not necessary at this stage. The position has been filled by a person with more than adequate practical experience in this field and is proving a valuable adjunct to the pest control units in

the field, undertaking research into, identification and classification of local insect pests and their habits.

Transportation

(a) The Field Hygiene Section's mobility is ensured by a fleet of 18 motor trucks of various capacities, of which six were added during the year. In addition the establishment provides for a departmental car and three subsidised vehicles.

Mosquitoes

(a) Complaints:

During the year 870 complaints were investigated, an analysis of breeding foci being shown below :-

| | | |
|---|---|---|
| Miscellaneous containers | 487 | (459) |
| Obstructed stormwater drains | 52 | ( 36) |
| Other drains and sub-floor areas | 18 | ( 24) |
| Defective septic tanks/soak pits | 36 | ( 29) |
| Buildings under construction/demolition | 87 | (105) |
| Natural swamps | 31 | ( 40) |
| Sanitary fitments | 10 | ( 18) |
| Undetermined | 68 | ( 50) |
| Unsubstantiated | 81 | ( 62) |
| | 870 | (823) |

The dumping of tins, tyres and other unwanted receptacles on to available open space by irresponsible persons unknown gave rise to the highest incidence of mosquito breeding and other public health pests.

Within the central areas the main breeding focus was found to be in buildings which were either being demolished or in the course of construction, the former being more difficult to detect but also to control in view of the fallen masonry and other debris.

(b) Aëdes Mosquito:

Arising from the intensification of housing development on the Bluff, the Department has been called upon to investigate an ever increasing number of mosquito complaints attributed to this species. Dr. R.C. Muirhead-Thomson, the entomologist referred to above, was able to prove that the prevalence of this mosquito was due to its predilection for breeding in the very deep leaf axils of the "wild banana" plant (Strelitzia nicolae) which grows in great profusion on the Natal coastal belt, and particularly on the seaward slopes of the Bluff.

The source of breeding having been established the task remained of finding some practical means of control because of the enormity of the breeding areas.

A research programme was commenced and some interesting facts were recorded:-

(a) three species of mosquito were found to be breeding in these plants, viz:-

Aëdes (Stegomyia) strelitziae;
Aëdes (Stegomyia) simpsoni; and
Eretmapodities quinquevittatus;

(b) the eggs of these mosquitoes remained viable for lengthy periods in dry weather;

(c) breeding was found in 70% of the plants examined;

(d) breeding was confined to the lower 1 - 1½ metres of the plant;

(e) an owner of property was called upon to remove a heavy growth of "wild banana" plants to a depth of 30 metres from the dwelling whereupon the abatement of the Aëdes infestation in this home was most dramatic.

It is now obvious that as these species favour a shady habitat and normally do not venture across open spaces, a practical control measure therefore appears to be in discouraging the growth of the Strelitzia nicolae in close proximity to any dwelling.

(c) Anti-Malaria Precautions

This Department is constantly alert to the feasibility of malaria recurring in Durban and 13 non-White "spotters" (10 Bantu and 3 Indian) have been engaged for a number of years in the task of collecting anopheline larvae in the field for identification in the Department's laboratory.

It was during the course of one of these surveys that anopheline larvae, collected from the recently incorporated Newlands area, were provisionally identified as Anopheles funestus by this Department and confirmed by the State Health Department Laboratories at Tzaneen (Annecke Institute). The terrain in which these larvae were found is mainly rugged, undeveloped with many natural wooded streams, and the area is sparsely populated but situated in close proximity to the small new Indian township of Parlock.

This is the first recorded occurrence of Anopheles funestus south of the Tugela River as no evidence of this species of mosquito having been found has been traced in the records of 1904-5, 1929 and subsequent malaria epidemics.

The anti-malaria campaign arising from this infestation was conducted in the following manner:

(i) mosquito surveys were greatly intensified throughout the City by utilising all available departmental personnel;

(ii) individual identification of all anopheline larvae was conducted in the Department's laboratory;

(iii) confirmatory identification was effected by the process of breeding-out adult mosquitoes in cages;

(iv) larval and adult specimens were also submitted to the South African Institute for Medical Research for confirmation of identification;

(v) drainage works by the Department's labour force was intensified to ensure that all streams were kept clear of overgrowth and free-flowing;

(vi) additional non-White labour was employed to intensify drainage works;

(vii) all affected water was treated with an organophosphorus larvicide having a highly selective property in that no aquatic life, other than mosquito larvae, was destroyed;

(viii) surveys of Parlock revealed that 52 residents had visited malarious areas during the early part of the year and the possibility of the mosquitoes becoming infected therefore could not be excluded;

(ix) night inspections were also made in this township when 222 rooms were inspected for anopheline adults and, although several specimens were found, none of these proved to be vectors;

(x) the co-operation of the press and radio was obtained to warn those travelling to malarious areas of the need for taking prophylactic anti-malaria tablets.

A total of 26 772 anopheline larvae were collected and examined in the Department's laboratory during the year. The breeding-out of A. funestus to adult stage in cages proved most difficult but nevertheless some success was achieved and, in accordance with the latest available identification "keys", the following Anopheles species were detected:-

Mosquito Larvae

| | | | |
|---|---|---|---|
| gambiae | Nil | longipalpis | 132 |
| funestus | 359 | marshalli | 175 |
| leesoni | 248 | natalensis | 469 |
| ardensis | 4 | pretoriensis | 2 179 |
| cinerous | 176 | listeri | 3 |
| demeilloni | 10 890 | squamosus | 1 595 |
| coustani | 10 525 | maculipalpis | 17 |

It is interesting to note that in recent years it has been found that there are at least six distinct species of A. gambiae which cannot be distinguished one from the other except by cross-mating and the examination of chromosomes. The World Health Organization is at present devoting much time and effort in determining whether the subspecies of A. gambiae have different vectorial capacities. A similar situation pertains with the A. funestus group (Ref. W.H.O. 72.402) and this aspect is also currently being investigated by the World Health Organization. However, until more conclusive evidence is available this Department, notwithstanding the absence of malaria cases in Durban, is continuing with full control measures in the Newlands area.

Mosquito control measures also included the "ditching" of 428 km of storm water furrows and natural streams on Town Lands and 15 210 litres of larvicide were utilised for destroying mosquito breeding which occurred in waters unsuitable for the introduction of mosquito eating fish.

(d) Biological Control

The control of mosquito breeding by the use of Tilapia fish, wherever practicable in sewage ponds and natural swamps, continued to be the most effective, practicable and economical method.

Flies:

The number of complaints received and investigated amounted to 269 and the sources of nuisance were as follows:-

| | | |
|---|---|---|
| Garden cuttings/compost heaps | 43 | (57) |
| Refuse receptacles | 31 | (24) |
| Poultry keeping | 20 | (29) |
| Refuse on vacant land | 53 | (30) |
| Manure/stables | 3 | ( 9) |
| Miscellaneous conditions | 72 | (57) |
| Undetermined | 18 | (23) |
| Unsubstantiated | 29 | (37) |
| | 269 | (266) |

Durban has not experienced any serious fly nuisance for several years and the City is comparatively clear of the pest. However, the ever increasing deplorable practice by persons lacking civic pride, of illegally dumping unwanted waste onto available open space is causing fly breeding and is a matter of concern. Frequently the owners of land are unaware of and powerless to prevent such occurrences but they become responsible for the

rectification of unhygienic conditions and in one instance, the Department had cause to remove 30 truck-loads of waste material, much of it heavily fly blown, from a set of premises following the non-compliance of a notice served on the owners who resided in another province.

It was interesting to receive from an Australian resident confirmation of the fact that, during a two year stay in the City, the absence of flies had been most noticeable in contrast to many parts of that continent where the fly screening of doors and windows was stated to be essential to secure relief.

Rodents:

(a) Complaints

During the year 625 complaints were investigated and appropriate action taken, blood anti-coagulant poisons continuing to be effective exterminants.

(b) Control in Harbour Areas

The possibility of the introduction of plague into Durban is kept constantly in mind particularly as a result in the increase in the number of vessels using the Cape route and, throughout the year, close liaison was maintained with the Port Health authorities. Some 300 kg of dry blood anti-coagulant poison was used in these areas and all relevant data on rodent activity was exchanged. In this regard 46 rodent carcases were submitted to the State Health Departmentfor plague indexing, all such specimens being reported negative.

(c) Municipal Institutions

Control measures, undertaken on requisition, continued to be satisfactory and 1 809 kg of dry blood anti-coagulant poison and 90 litres of the liquid form was used during the year on these properties.

Extensive "gassing" and poisoning operations implemented at the Umlazi Glebe Bantu Hostel revealed that in only one section was there any heavy infestation of rodents which appeared to be mainly due to the attraction provided by a number of used Bantu beer containers.

Various forms of anti-coagulant poisons, impregnated in wax bait, were tested by the Department during the year. None of these, however, were found to be completely suitable in that they were not sufficiently attractive to rodents.

Bed Bugs

The control of cimex infestation in the five Bantu Men's and the Bantu Females' Hostels is undertaken by this Department as a charge against the Bantu Administration Department and is carried out by a unit of five labourers under a Bantu Overseer. The use of 0,5% Diazinon mixture as a wet spray produced excellent results and, for the first time, it can be claimed that this pest is under adequate control. However, the efficacy of other organophosphates and carbonates is tested from time to time.

Anti-cimex measures were continued in the subeconomic dwellings at the Indian housing schemes of Chatsworth and Merewent, the occupiers being charged a nominal fee for the service.

Cockroaches

The Department implements measures for the control of cockroaches in Municipal institutions and satisfactory results were maintained with Diazinon, used at a strength of 1,0%.

In addition to the treatment within premises, particular attention was also paid to sewers, gutter bridges and stormwater drains within the central City area, 9 904 points being treated.

Bush Clearing

The Department undertakes, on a tariff basis, the clearance of overgrowth from private and Municipal premises and during the year, a total of 276 hectares of vacant land was cleared of rank weed and other vegetation.

Domestic Pest Control Operators

It has been the policy of this Department since 1968, as a prerequisite to reporting favourably for the granting of a trading licence, to test aspirant pest control operators on their knowledge of first aid and of the hazards stemming from the misuse of pesticides. Thirty two persons presented themselves for examination but the failure rate was high only eight being successful.

Whilst the measures adopted by this Department serve a useful purpose, national legislation is obviously desirable for controlling this type of occupation in a similar manner to the regulations applicable to the use of cyanide gas.

Insecticidal Poisoning

A case of poisoning suspected to be due to a new lounge suite was reported following an illness which occurred after the purchase of this furniture. In view of the

publicity given to similar cases in the Transvaal, an investigation in co-operation with the State Health Department was carried out with negative results.

Lectures to Students

Practical demonstrations and lectures were given to fifth-year non-White medical students on subjects such as refuse disposal, sewage treatment and pest control measures in relation to public health work.

## IX. HOUSING

The Housing Inspectorate comprised a Senior Health Inspector, and two Health Inspectors engaged on housing matters generally, demolitions and slum clearance. However, due to staff shortages, one Health Inspector was seconded to District Sanitation duties for most of the year.

### Building Plans

During 1972 plans for residential development referred for departmental approval on public health grounds were as summarised below:-

| Accomo-dation | | | | | | | Units | Plans | Cost |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6+ | | | |
| Dwell-ings | - | 3 | 26 | 262 | 262 | 338 | 891 | 891 | 12 472 930 |
| Flats | 200 | 485 | 1 342 | 561 | - | - | 2 588 | 111 | 20 315 070 |
| Other Resi-dential | | | | | | | | 1 | 1 500 000 |
| Addit-ions | | | | | | | | 2 910 | 7 128 888 |
| Total | 200 | 488 | 1 368 | 823 | 262 | 338 | 3 479 | 3 913 | 41 416 888 |

### Demolitions and Conversions

In terms of the Housing Act, no person may demolish, or convert to other use, housing accommodation without the approval of the Minister, for which purpose application must be first lodged with the local authority. During the year 254 applications were submitted respecting premises occupied (or recently occupied) by 101 White families, 14 Coloured, 68 Indian and two mixed races. Of the 254 premises inspected, 61 were found at the time to be owner-occupied, 124 were occupied by tenants and 69 were vacant. Departmental recommendation was conditional upon the occupiers obtaining alternative accommodation. Applications not supported on public health grounds amounted to 54.

These applications for permission to demolish or convert dwellings were lodged with the undermentioned projects in view:-

| | |
|---|---|
| Flats/Maisonettes | 58 |
| New dwellings | 63 |
| Commercial purposes | 79 |
| Industrial use | 23 |
| No immediate development | 29 |
| Miscellaneous | 2 |
| | 254 |

Slum Clearance:

The department's routine programme continued throughout the year under the overall direction of the Deputy City Medical Officer of Health, who inspected 71 premises which were processed for presentation to the Slum Clearance Court for the Durban area.

Compared to previous years the number of premises processed dropped considerably due to a curtailment in the slum clearance programme brought about by the lack of suitable alternative housing accommodation as well as staff limitations.

Of the 71 premises processed in 1972, 54 were occupied by Indians and two by Europeans. Premises occupied by persons of more than one race totalled 14 and only one property was vacant.

All the premises were of a single-dwelling unit layout with the exception of one property which comprised 18 units; in all a total of 88 buildings. These were tenanted by 316 families made up of 1 362 persons.

The Slum Clearance Court was convened on 47 occasions and, after due enquiry, issued slum declarations in respect of 100 premises altogether, requiring demolition in the majority of cases and ordering partial repair, partial demolition and repairs to the satisfaction of the local authority for the remainder. Not all cases processed were declared slums or proceeded with for various reasons which included acquisition by the re-housing authorities or compliance by the owner with the requirements of this department prior to the Slum Clearance Court hearing. As of the year end hearings pending in respect of 44 cases.

One prosecution was instituted for non-compliance with the Slum Clearance Court's order.

In order to appreciate the extent of the department's activities from the time slum clearance was resuscitated in 1965 to the end of the current year, the following data is relevant:-

| | | | | |
|---|---|---|---|---|
| 1. | (a) | Number of premises processed | | 1 238 |
| | (b) | Race group of occupation: | | |
| | | White | 114 | |
| | | Coloured | 125 | |
| | | Indian | 750 | |
| | | Bantu | 24 | |
| | | Mixed Races | 223 | |
| | | Chinese | 1 | |
| | | Vacant | 1 | 1 238 |

| | | | |
|---|---|---|---|
| 2. | (a) | Building Units Involved | 1 673 |
| | (b) | Family Units Housed therein | 4 829 |
| | (c) | Persons Involved | 22 737 |
| 3. | The Slum Clearance Court ordered: | | |
| | (a) | Total Demolition (369 implemented) | 559 |
| | (b) | Partial Repair/Demolition (39 complied with including 7 totally demolished) | 102 |
| | (c) | Renovation to the satisfaction of local authority (19 completed) | 43 |
| | Total Slum declarations | | 704 |
| 4. | Rescission orders granted | | 317 |
| 5. | Voluntary demolitions without declaration | | 336 |
| 6. | Voluntary repair/renovation/partial demolition | | 28 |
| 7. | Cases withdrawn: | | |
| | (a) | Due to ownership passing to a public authority: | 101 |
| | (b) | permits to demolish granted under Housing Act. | 25 |
| 8. | Appeals to Minister against declaration: | | |
| | (a) | Dismissed; | 8 |
| | (b) | upheld; | 1 |
| | (c) | new appeals lodged - results awaited | 1 |
| 9. | Prosecutions for non-compliance: | | |
| | (a) | Cases instituted; | 45 |
| | (b) | admission of guilt fines | R760-00 |

The position respecting the premises processed can therefore be summarised as follows:-

| | | |
|---|---|---|
| Slum declarations | 704 | |
| Voluntary compliance | 364 | |
| Demolished under Housing Act permit | 25 | |
| Pending | 44 | |
| Withdrawn | 101 | 1 238 |

PREMISES BEFORE SLUM CLEARANCE (OWNER - OCCUPIED)

SAME PREMISES AFTER SLUM CLEARANCE AND REBUILDING BY OWNER

Amendment of Public Health Bylaws:

Section 19 of the Building Bylaws provided, inter alia, that no building or part thereof shall be used for habitation unless it complied with the legislation relating to domestic or habitable buildings, and no part of any building not specifically shown on plans approved as intended for human habitation shall be used for that purpose.

In the absence of appropriate legislation the department had to make do with this bylaw for the routine control of unhygienic housing, such as occurs in sub-floor areas, garages and the like, which are devoid of basic, minimal standards of lighting and ventilation. It was therefore considered desirable to adopt a public health bylaw framed on the lines of the Second Schedule to the Slums Act.

The proposals, however, engendered some thought that enforcement would aggravate the current shortage of suitable living accommodation. Nevertheless the Council ultimately adopted the recommendation, which was gazetted in Provincial Notice No. 471 dated 5th October, 1972, and Section 25A now provides as follows:-

> ".....No person shall let, hire, occupy, or cause or allow to be let, hired, or occupied any room for sleeping in -
>
> (a) which was approved as -
>
> (i) a kitchen, pantry or food preparation room;
> (ii) a bathroom, water closet, privy or laundry;
> (iii) a hallway, stairway, landing or passage; or
>
> (b) which does not comply with the relevant standards prescribed in the Building Bylaws relating to minimum dimensions, and lighting and ventilation by natural means."

Illegal Shack Construction:

Regular checks were carried out within the City for signs of illegal shack development particularly in the Newlands, Sea Cow Lake, Kenville and Effingham areas where such activities were prevalent during the previous year.

Fifty instances of illegal shack building or illegal extensions were noted during 1972 and were referred promptly to the City Engineer's Department or the Bantu Administration Department with whom close liaison was maintained.

Following receipt of a complaint through the Town Clerk it was established that 16 shacks in Hippo Road, Sea Cow Lake, had been resited because sections of the area were being developed as a township. The attention of the City Engineer was directed to the fact that these shacks, (the number subsequently increased to 19), were being re-erected on private land and did not comply with the standards of the Slums Act or the Council Resolution of the 5th September, 1957, relating to conditions regarding shack erection. The structures were not provided with proper sanitary accommodation, refuse removal services or sewer and water connections, thereby providing conditions favouring fly development, vermin harbourage and the creation of a serious public health nuisance.

Although certain improvements to sanitation, water supply and refuse removal were effected, the matter had not been finalised by the year end but was being pursued.

Regular surveys were carried out in the "New Farm" area of Phoenix Newtown, at Mount Edgecombe outside the borough, which is earmarked for incorporation into Durban in due course for the development of the projected Phoenix Indian Housing Scheme. It was disclosed that shack building had reached an estimated total of 430 units, involving an increase of some 130 units during the year.

As the question of jurisdiction was originally in doubt the matter was referred to the Town Clerk who pursued the matter with the Provincial Secretary, resulting in a request being made to the Regional Director, State Health Services : Natal that an endeavour be made to halt further shack development in this area.

Cluster Housing

During 1972 the first large-scale private housing scheme incorporating cluster-type layout was commenced at Woodhaven, situated on 80 hectares of land, next to Yellowwood Park. Full development of the site to the maximum density permitted will provide 239 detached houses, 474 grouped dwellings and 320 more conventional flats totalling 1 033 living units, together with the ancillary small business centres, schools, creches, parks, etc.

A genuine attempt is being made to create a new atmosphere, with encouragement for people to meet and engage in social activities, to become involved with their surroundings and to care about them - all within the restraints applicable to the area.

The proposed new Indian Townships of Phoenix and Newlands which will ultimately contain some 22 000 and 8 000 living units respectively housing approximately 200 000 people are also being designed on the cluster lay-out principle which

will undoubtedly be a radical improvement on Chatsworth where a monotony of design and placement is immediately apparent.

Under the condominium legislation of some countries, cluster development can be fully accommodated but it appears that this is not so under the Sectional Titles Act (No. 66 of 1971) in its present form. Ownership of the private open space may have to be vested in a corporation (home owner's association) or trustees, and rights of access to the space would be guaranteed by the registration of appropriate servitudes.

Being a new concept, no specific provision is made in the Town Planning Regulations or Building Bylaws to cover combinations of various types of units in single houses, semi-detached units, duplex flats, maisonettes, etc. and therefore existing town planning regulations for the specific residential zones and types of unit are applicable.

Housing in Durban

In reporting upon the housing conditions in this local authority area in respect of overcrowding and bad and insufficient housing, in accordance with my duty in terms of Section 131 of the Public Health Act, 1919, this department is indebted to the City Treasurer and the City Engineer for supplying information concerning the housing provision made by the City Council for Whites, Coloureds and Indians along with sources of funds, eligibility for housing allocations and sundry comments regarding the situation in Durban, generally.

In terms of the Housing Act, 1966 (No. 4 of 1966) housing funds are made available by the Department of Community Development to local authorities and these are obtained from two sources:-

(a) The National Housing Fund which derives its annual allocations from Parliament and advances capital at the following interest rates:-

Economic advances at ¾% below the economic interest rate fixed by the State Treasury from time to time. The rate applicable from the 1st October, 1972, is 7 5/8%. Sub-Economic advances at 1% + 1/20%

(b) The Community Development Fund which derives its assets from annual allocations from Parliament and from any income received from the letting or sale of properties. Advances are made only at an economic rate of interest as fixed by the State Treasury, at present 8¾%.

Economic advances (letting or selling) are all subject to the following conditions:-

(i) the purchaser or tenant must be married or have dependents who reside with him permanently;

(ii) in the case of a purchaser, he himself or his wife should not already be the owner of another dwelling which is suitable for human occupation;

(iii) the purchaser or tenant must require the dwelling for his personal occupation;

(iv) the gross income of the purchaser or tenant must not exceed the maximum limit which is, briefly, as follows:-

Whites: From R270,00 per month without children to R400,00 per month with more than four dependent children.

Indians and Coloureds: R225,00 per month irrespective of the number of children.

The Department of Community Development does, however, assist tenants in letting schemes whose incomes are at the lower end of the economic group by fixing reduced rentals, and this loss is met as a reduction in the annual interest payments on advances due to the Department.

The maximum cost of construction of a dwelling in respect of all cases (including Bantu) for scheme-type houses is R6 000.

Sub-Economic Schemes are subject to the following conditions:-

(a) the applicant should be married and have dependents permanently resident with him;

(b) the monthly income of the head of the family must not exceed R130,00 per month in respect of Whites and R60,00 per month in respect of Coloureds and Indians.

When a tenant's income exceeds the permissible maximum and no other suitable accommodation is available, he is permitted to continue residing in the scheme on payment of an additional rental of 30c for every rand earned above the maximum.

Sub-economic advances are available for the erection of houses and schemes for the aged at the lower interest rate of 1/20%, this rate being available only providing the tenant's income does not exceed the limits prescribed by

the Department of Social Welfare and Pensions, Indian Affairs and Coloured Affairs, as the case may be, and provided further that these Departments undertake to meet the loss incurred between the 1% and 1/20% interest rates.

The City Council has become seriously perturbed because the allocation of funds from the National Housing Commission for the provision of low-cost housing has become completely inadequate over the last two years to enable any substantial impact to be made on the housing backlog.

Whereas advances from Government sources for the fiscal year 1969/1970 amounted to R8 million, the allocations in the subsequent three years were as follows:-

| | |
|---|---|
| 1970/1971 | R3,7 million |
| 1971/1972 | R3,8 million |
| 1972/1973 (estimated) | R4,9 million |

In regard to the last figure, requests have been received from the Department of Community Development for a substantial portion of this sum to be financed from Housing Maintenance and other reserves of the City Council.

A brief history of the housing progress over the past 10 years, and the position in 1972, gives some indication of the problems with which the City Council is confronted in providing adequate housing for the various race groups in the lower income categories.

White Housing

At the commencement of the decade under review, demands then existing were considered to have been met, with provision made for further housing schemes on land available for the purpose.

However, once these schemes had been developed e.g. Woodlands at which land was acquired at an average price of R150,00 per acre, the development of further economic schemes at a price that the lower income group - for whom the schemes are intended - could afford, became a real difficulty, having regard to the price and availability of suitable land in sufficient quantities, coupled with escalating building costs.

The consequential increase in the cost of houses, a factor which was tending to push home ownership beyond the means of the lower income group, led to difficulties with regard to the "ability to pay" regulations.

These provide that mortgage bond repayments of principal and interest and assessment rates should not exceed 25% of the gross income of the head of a family and the increased repayment instalments tended to reduce the applicants to whom houses could be allocated.

In any metropolitan complex, land of necessity becomes more expensive, and because of the effect that this additional expense had on the cost of housing and the resultant problems that emerged with the "ability to pay" regulations, the outlook towards meeting demands for accommodation from the lower/middle income group underwent a change.

Because of the problem of adequate land availability, at a reasonably low price for development as a housing scheme, consideration was given to medium to high density housing and this resulted in a greater volume of flat development.

In this connection the following statistics give some indication of the rate at which flat units have been constructed in more recent times:-

| Five Years prior to 1966 | Since 1966 |
|---|---|
| None | 440 units |

In addition a sub-economic block of flats comprising 89 units was erected in Leathern Road (Denny Court) very recently to provide accommodation for persons whose incomes do not exceed R130,00 per month.

For reasons to which reference had been made earlier herein, the development of houses has fallen off and although the Hillary Housing Scheme has been developed in recent years and provision has been made for its extension, and land in the Cato Manor area has been set aside for development, the future prospects of further housing scheme developments do not appear to be promising.

In the last five years no more than 228 houses have been provided for white occupation. However, consideration is presently being given to the development of 500 houses in the Bellair area, for allocation to the lower income groups whilst some land is being made available in the Riverside/Prospect Hall area, the development costs of which are being shared equally between the City Council and the Department of Community Development. The locality is a renewal area, the land having been acquired from persons falling into different racial groups and it has been completely replanned.

In due course some 425 acres of land will be made available to buyers falling into, it is envisaged, the middle to upper income groups. However, as these persons move into the area, additional existing housing units will then be released for accommodation of the lower income groups.

During 1972 the following units of accommodation were provided by the City Council for White occupation :-

| | | |
|---|---|---|
| Houses | 114 | (Third Section, Hillary Housing Scheme) |
| Flat Units | 89 | (Denny Court, Sub-Economic Scheme) |

The City Council has no houses for letting to Whites, all such accommodation being sold to allottees. However, flatted accommodation is available for letting only, the details of which are set out hereunder:-

| Block | Type of Accommodation |
|---|---|
| Kenneth Gardens | 54 x 1 bedroom units (and porch) |
| | 228 x 2 " " ( " " ) |
| Kirkwood Gardens | 24 x 1 " " ( " " ) |
| | 48 x 2 " " ( " " ) |
| Umbilo | 18 x 1 " " ( " " ) |
| | 30 x 2 " " ( " " ) |
| Westgate Gardens | 84 x 2 " " ( " " ) |
| Marloth Gardens | 48 x 2 " " ( " " ) |
| Elwyn Court | 120 x 1 " " ( " " ) |
| | 20 x 2 " " ( " " ) |
| Lantern Heath | 27 x 1 " " |
| | 58 x 2 " " |
| Pengelly | 39 x 1 " " |
| | 58 x 2 " " |
| Taybank | 19 x 1 " " |
| | 40 x 2 " " |
| Flamingo Court | 50 x 1 " " |
| | 150 x 2 " " |
| Denny Court (Sub-economic) | 17 x 1 room and kitchen units |
| | 24 x 2 " |
| | 24 x 3 " |
| | 24 x 4 " |

The number of unfulfilled applications received from the White group as at 31st December, 1972, was as follows:-

| | |
|---|---|
| Selling Schemes | 1 782 |
| Letting Schemes | 1 137 |

Sketches and estimate details in respect of the revised project for the second stage of development at the Hillary Housing Scheme covering the erection of blocks totalling 210 flats (198 x 2 bedroom units and 12 x 3 bedroom units - economic letting scheme) were completed

and received the necessary approvals during the year. Funds have been allocated for this project to proceed during 1973 and the preparation of working drawings and documents for the invitation of tenders is to be put in hand at an early date.

A contract for the erection of 28 single rooms (plus kitchen) (Sub-economic Letting Scheme) for aged persons at Arcadia Homes was awarded and construction work commenced. This project is due for completion by the middle of 1974 and individual allocation will be undertaken by the Association for Retired Durban Citizens.

No schemes for White housing were completed by the Department of Community Development during the year and no schemes are planned for the immediate future.

Coloured Housing

At the commencement of the 10 year period, the provision of housing for the Coloured community presented a very vexing problem. Outstanding demand for accomodation in relation to the size of the population group was high, there being 2 087 applications on file at mid-year as against 1 113 in 1963, and although a number of schemes were in hand, very little additional land was available for development for Coloured housing.

The City Council's inability to provide adequate housing for this community evoked criticism, but the further provision of houses is restricted by the lack of land zoned for this purpose in terms of the Group Areas Act.

On the other hand the Department of Community Development has land owned by the Government in Austerville and this is being developed. It is understood that some 1 100 units of accommodation will be provided in this area.

Although 25 plots of land have been made available by the City Council for development by the Coloured community, considerable difficulty is being experienced in allocating the plots because of problems associated with the "ability to pay" regulations and the high costs of development.

The future prospects are fairly bright as negotiations which are now proceeding between the City Council and the Department of Community Development make it likely that the land zoning problem will be resolved, when progress will be made in the provision of housing units which are so sorely needed.

However, no houses or flats were made available by the City Council for allocation to members of the Coloured community during 1972. The situation therefore

continued when this Department felt compelled to defer any action under the Slums Act where Coloured tenants were involved because of the impossibility of arranging alternative accommodation for those who would have no alternative accommodation in consequence.

The following sub-economic letting schemes exist:-

Houses:

| Suburb | Units | Type of Accommodation |
|---|---|---|
| Sparks Estate | 24 | 3 and 4 rooms |
| Sparks Estate Ext. | 25 | " " " " |

Flats:

| Suburb | Units | Type of Accommodation |
|---|---|---|
| Sparks Estate | 48 | 2 rooms |
| Melbourne Road | 64 | 2, 3 and 4 rooms |

A small economic scheme comprising 10 houses in Sparks Estate is occupied on a basis of a lease with the option to purchase.

The remaining houses provided for Coloureds were sold to occupants.

The number of outstanding applications received from members of the Coloured community as at the year end was as follows:-

| Economic Schemes | Sub-Economic Schemes |
|---|---|
| 1 448 | 701 |

The following schemes have been planned and will comprise the units stated:-

Economic Letting:

| Suburb | Units | Type of Accommodation |
|---|---|---|
| Merebank/Wentworth | 144 | 64 x 2 room units (excluding kitchen) |
| | | 80 x 3 " " (excluding kitchen) |
| Sydenham | 231 | 120 x 2 " " " |
| | | 111 x 3 " " " |

The first scheme was approved by the National Housing Commission but no tender has yet been accepted. In terms of a directive negotiations in respect of an offer which will be acceptable to both the City Council and the Commission were put in hand with the lowest tenderer. It is anticipated that work on this project will commence early in 1973.

The Sydenham Flats scheme has not yet been finally approved, the delay arising from difficulties associated with the land acquisition, although approval for the expropriation of the Sydenham Hotel property, on which the flats are to be sited, has been received.

Sub-Economic Letting:

| Suburb | Units | Type of Accommodation |
|---|---|---|
| Merebank/Wentworth | 156 | 3 room plus kitchen units |

This scheme was approved by the Commission but a final tender had not been accepted during the year; none the less it is anticipated that work will commence on this project early in 1973.

Sub-Sub-Economic Letting Scheme:

| Suburb | Units | Type of Accommodation |
|---|---|---|
| Merebank/Wentworth | 110 | 20 x 2 room units<br>42 x 3 "<br>48 x 4 " |

Contract documents have been prepared ready for the invitation of tenders as soon as an allocation of Government Housing Funds is received.

The Department of Community Development assisted in alleviating the housing shortage by provision of the following:-

(a) 107 houses (Economic Selling) at Austerville, all of which were completed and occupied;

(b) 42 semi-detached houses (Economic Letting) converted from existing buildings (ablution/sanitary blocks), all of which were completed and occupied. Another building still remains to be converted to one four-bedroomed flat;

(c) a scheme for 37 economic houses, also at Austerville, was commenced during November, 1972.

Projects which were still in the planning stages included the following:-

(a) 558 flats comprising 342 economic and 216 sub-economic units at Austerville. (Start expected early this year);

(b) three blocks totalling 72 flats (economic).

The Department of Community Development re-housed 10 Coloured families from declared slum premises during the year. In addition, 59 Coloured families comprising 307 persons were re-housed from the Happy Valley area at Wentworth where poor housing conditions existed.

There are 202 Coloured families living in slums so declared before 31st December, 1971, and who are to be re-housed by the Department of Community Development as soon as accommodation becomes available.

Indian Housing

Ten years ago the general situation regarding Indian housing was considered to be very serious, there being at that time a very large number of unsatisfied applications on the City Council's waiting lists.

However, because work was due to start on the mammoth Chatsworth Indian Housing Scheme, which it was anticipated in 1962 would provide houses at the rate of 4 000 per annum over a five-year-period, it was considered that the tremendous backlog of Indian housing would be overcome.

The expectation did not materialise and development failed to gather momentum, average production not exceeding approximately 2 000 units annually.

The prime cause for the adverse variation between proposed and actual construction can mainly be attributed to a lack of adequate allocation of funds by the Government for housing purposes. Its effect can be gauged by a comparison of outstanding applications of 7 344 in July 1963 as against 19 340 in July 1972.

The increase in the number of applications by the Indian community has, to some extent, been brought about by the implementation of Government policy which resulted initially in 25% - later increasing to 100% and recently reduced to 50% - of allocations being made by the Department of Community Development for resettlement purposes.

Although that Department relaxed the condition allowing the local authority to allocate 50% of housing units produced, the advantage gained was reduced by a condition imposed that responsibility for re-housing slum dwellers, which previously devolved upon the Department of Community Development, now had to be assumed by the City Council.

The problem was accentuated as throughout the City urgent public works were taking place, for example, South African Railways Diesel Depot, National Transport Commission's Outer Ring Road and the City Council's new Bulk Sales Market, and these required demolitions and re-accommodation of the tenants, so adding to the priority allocations from the City Council's share of units constructed.

In these circumstances little, if any, of the housing production next year is likely to be available to persons on the City Council's waiting lists.

During 1972, the following units of accomodation were completed or partially erected:-

(a) Economic Selling Schemes:

(1) Merebank/Wentworth - 99 houses (4 roomed)
(100% allocation by the City Council)

All completed, some of which were required to re-house families displaced by the new Southern Free-way, this being the only housing project undertaken during the year in this area.

(2) Chatsworth (Unit 11) - 119 houses (4 and 5 rooms)
(50% allocation by the City Council)
59 houses in this scheme were completed during 1972.

(b) Economic Letting Scheme with Option to Purchase:

(1) Chatsworth (Unit 10) - 822 houses (4 rooms)
(100% allocation by the Department of Community Development)
All houses in this scheme were completed during 1972.

(2) Chatsworth (Unit 11) - 652 houses (3 and 4 rooms)
(50% allocation by the City Council).
During the year 26 houses were completed in this scheme.

(c) Sub-Economic Letting Scheme:

(1) Chatsworth (Unit 10) - 450 flats ( 4 rooms)
(50% allocation by the City Council).
During 1972, 360 flats completed by the City Council.

(2) Chatsworth (Unit 11) - 742 houses (3 and 4 rooms)
(50% allocation by the City Council).
In 1972, 54 houses were completed.

(3) Merebank/Wentworth - 202 sub-sub-economic flats
(2, 3 and 4 room, no kitchen)
(50% allocation by the City Council).

Although this scheme was completed in 1971, occupation was only effected during 1972.

The number of unfulfilled applications from the Indian community as at the year end was as follows:-

| Economic Schemes | Sub-Economic Schemes |
|---|---|
| 14 454 | 5 559 |

The following projects have been planned:

(1) Economic Selling Scheme (Chatsworth Unit 6):

110 houses of 3 or 4 rooms.

(2) Sub-Economic Letting Scheme (Chatsworth Unit 11):

306 houses of 3 and 4 rooms.

Both schemes were approved by the National Housing Commission in February, 1972, but no funds had been allocated by the year end.

With regard to Newlands and Phoenix to the north of Durban where it is planned to provide 8 380 and 22 050 housing units respectively, negotiations for the acquisition of the land continued. Other than completion of the construction headquarters, stores and workshop buildings at Phoenix, as well as housing for 400 labourers, very little progress was made with actual development work owing to lack of finance. Progress was therefore confined to the Phoenix scheme only.

Present indications are that the position during the coming fiscal year will again be unfavourable and therefore only limited to work to provide services at Phoenix can be anticipated.

Units of accommodation available on a purely letting basis are as follows:-

| | Sub-Economic Houses | Sub-Economic Flats |
|---|---|---|
| Completed | 4 667 | 2 270 |
| In Hand | 688 | 90 |
| | 5 355 | 2 360 |

Although the Department of Community Development did not complete any housing units in the City during the year for Indians, schemes are presently being developed or planned in areas adjacent to the City, as follows:-

(1) Shallcross:

1 474 residential units completed
250 vacant building sites are available for disposal to private individuals.

(2) Shallcross Extension No.1:

250 "better class" houses are at present under construction and a further 600 serviced sites are available for development by either the Department of Community Development or by private individuals.

The Department of Community Development re-housed nine Indian families during the year from declared slum premises but there are still 355 Indian families living in slums which were "declared" such before the end of last year and who are waiting for accommodation to become available.

Future Housing Proposals:

A 10 year development programme has been prepared for the provision of housing for White, Coloured and Indian low income groups.

The City Engineer's calculations take into account the existing housing backlog as reflected by the waiting lists, the projected increase in population over the period and the proportion of housing estimated to be provided by private enterprise. The latter is anticipated to meet 85% of the White housing requirements but only about 20% of that for Coloureds and Indians.

The requirements of the next decade may be briefly summarised as an increase in the annual production from 1 150 units to 5 750 in the year 1981/1982 with a corresponding increase in Government advances from R5 million to R22 million over the same period.

The biggest consideration confronting the City in implementing these proposals involves obtaining adequate finance with the co-operation of the National Housing Commission, and the assistance of the Department of Community Development in acquiring the necessary land, approving schemes and awarding contracts timeously.

At the end of the period 1981/1982, and despite the expenditure of the vast sums of money referred to, the backlog of housing units is expected to be as follows:-

| White | Coloured | Indian |
|---|---|---|
| 2 600 | 1 100 | 7 000 |

These numbers may well be further increased by urban renewal in parts of the City such as Clairwood and possibly by the Group Areas Act. The programme cannot be considered adequate and can only be regarded as minimal to make progress in the ultimate elimination of the serious housing shortfall prevalent in the City.

Regarding the future provision for Indian housing, representing the largest number of unfulfilled applications, Chatsworth is now nearly complete and huge schemes have been planned for Newlands and Phoenix to house ultimately 200 000 persons. As far as possible these townships will be peopled by a fully integrated

society both socially and economically with opportunities for employment within adjacent areas or easy reach of Pinetown or Durban.

In planning the lay-out of Newlands and Phoenix, experience gained in the development and administration of Chatsworth has been used as a guide. The new townships should be an improvement in a number of respects and allow a greater degree of community integration.

Bantu Housing

(1) kwaMashu Township

While no further accommodation was provided, approval for the erection of a further four schools and the addition of classrooms to existing schools was received during the latter part of the year and, when completed, will greatly improve school facilities in the township. Construction work on the first new school, a post-primary institution, together with the additional classrooms, was commenced.

Road improvement work adjacent to kwaMashu railway station opposite the Township Centre was put in hand and when completed will improve conditions in this vicinity.

(2) Umlazi Glebe

Funds became available and construction work was commenced during the second half of the year on the 19 616 bed hostel project for males. This work, including a new administration block, will be one of the first buildings to be completed.

Providing adequate funds are made available each year it is anticipated the project will be completed within a period of five to six years.

(3) Extra-City Schemes

The Durban City Council, acting as agent for the South African Bantu Trust, has been concerned in the planning and development of two vast Bantu townships situated outside Durban, and the current position is briefly reported below:-

(i) Umlazi: In regard to this scheme to the south, as was expected there were severe cuts in the financial allocation for the fiscal year and so it was necessary to curtail development considerably with the result that the provision of services, including roads, schools and housing

proceeded at a much slower rate than in 1971. During the period under review, 307 houses were completed and handed over for occupation, and the building of two clinics for the Department of Health was put in hand and progressed almost to completion. Augmentation of the main water supply to the township began and this work will continue into the coming year to keep pace with increased demand.

Estimated population at the year end was 136 600.

Indications are that the present restricted rate of development will continue during the coming year and this will require priorities to be closely examined in the light of funds available.

(ii) Ntuzuma: In this case also the greatly reduced financial allocation for 1972 slowed the tempo of work which had prevailed in 1971, thus necessitating a 40% reduction in the labour force. Also heavy expenditure on access services to this new scheme was necessary with the result that very little money was available for actual house construction and provision of ancillary services.

In all, 208 houses and one school only were completed and handed over for occupation.

Work under contract on the extension to the kwaMashu Sewage Treatment Works, to cater for this township and other areas in the vicinity, proceeded throughout the year and will continue through 1973 when again it will demand a considerable portion of the capital sum available.

Work on the access water supply also proceeded well during the year and a temporary main was laid to the terminal reservoir, under construction and sited near the centre of the scheme and the main pump station and a service reservoir, without which no further houses could be handed over.

Here again it is anticipated that there will not be any improvement in provision of funds in the coming financial year and development work during this period will be restricted in consequence.

The following details supplied by the Director

of Bantu Administration reflect the Municipal housing position in the City as at 31st December, 1972:-

| Institution and Type of Accommodation | Units | Occupants |
|---|---|---|
| (a) Municipal Family Housing: | Houses | |
| Lamont and Lamont Extension | 1 911 | 21 000 |
| Lamont Extension: Economical Housing Scheme | 851 | |
| Chesterville | 1 265 | 9 500 |
| kwaMashu (ultimately 16 000)* | 15 404 | 114 500 |
| | 19 431 | 145 000 |

*Unit K.46 (shared) houses regarded as two units.

| (b) Municipal Single Accommodation | Beds |
|---|---|
| (i) For Men: | |
| Dalton Road Location | 1 452 |
| Jacobs Location | 886 |
| S.J. Smith Hostel | 4 417 |
| kwaMashu Location (Hostel Unit) | 16 880 |
| Umlazi Glebe Hostel | 3 010 |
| (ii) For Women: | |
| Thokoza Women's Hostel, Grey Street | 677 |
| | 27 322 |

In addition to permanent residents, tickets for casual accommodation are issued nightly and lodgers' permits are issued in family locations.

Other forms of Bantu housing available include domestic servant's accommodation provided by householders and various classes of employees housed by State and Provincial authorities and employers in premises licensed under Section 9 (4) of the Bantu (Urban Areas) Consolidation Act, No. 25 of 1945, as amended.

# X. MILK SUPPLIES

## FRESH MILK PRODUCTION

The bulk of Durban's fresh milk supply is drawn from central and southern Natal, while East Griqualand produces some 12,5% and northern Natal some 6,5% of the total production of fresh milk in the City's area of supply.

Reasonably good climatic conditions prevailed for dairying, and fresh milk supplies were adequate for the City's needs during the whole of the year under review. An average daily production of some 355 000 litres was achieved by registered producers. Production was at its lowest during April-May at about 330 000 litres daily, and reached a peak in November of some 371 000 litres.

Producers are registered to supply milk to the City only when certain structural and hygienic requirements are fulfilled as regards their farm dairy premises and equipment. Three Dairy Inspectors and a Senior Dairy Inspector are engaged on the registration of new suppliers, the maintenance of a high standard of the premises of existing registered producers and advisory work relative to methods of clean milk production on the farm. The bulked milk of each producer is sampled on a regular basis for laboratory testing in the departmental laboratory. Sediment testing is carried out by the Dairy Inspectors when on the receiving platform, and during the year under review 13 338 litres of milk were rejected on account of excessive visible dirt.

Mechanical milking is becoming ever more popular and of the 502 registered producers at the end of 1972, 338 (67%) used machine milking. It is also noted that refrigerated farm bulk storage tanks for milk are being installed in increasing numbers - there were 90 in use at the end of 1972. This modern, hygienic method of storage is encouraged.

## TRANSPORTATION OF FRESH MILK

Milk dispatched from the farms in cans by road transport is consigned either direct to a City dairy plant or to one of seven inland receiving depots. On arrival at the depot the milk is bulked, weighed, re-cooled and stored pending tanker transportation to Durban. Milk that is stored in bulk tanks on the farms is collected every 48 hours by farm collection tankers.

Approximately 65% of the daily fresh milk intake at the City's processing plants arrives in insulated road tankers.

The hygiene of milk receiving depots and of road tankers is under constant surveillance by the City Health Department.

HEAT-TREATING, BOTTLING AND DISTRIBUTION

All milk and milk products sold in the City are heat-treated, either by pasteurisation or by high temperature sterilisation.

After pasteurisation milk and milk products are bottled, canned or cartoned, date coded and placed in refrigeration. These products are then conveyed to suburban milk depots in refrigerated pantechnicons from where distribution is made to householders and retail outlets by means of motorised, electric or hand vehicles.

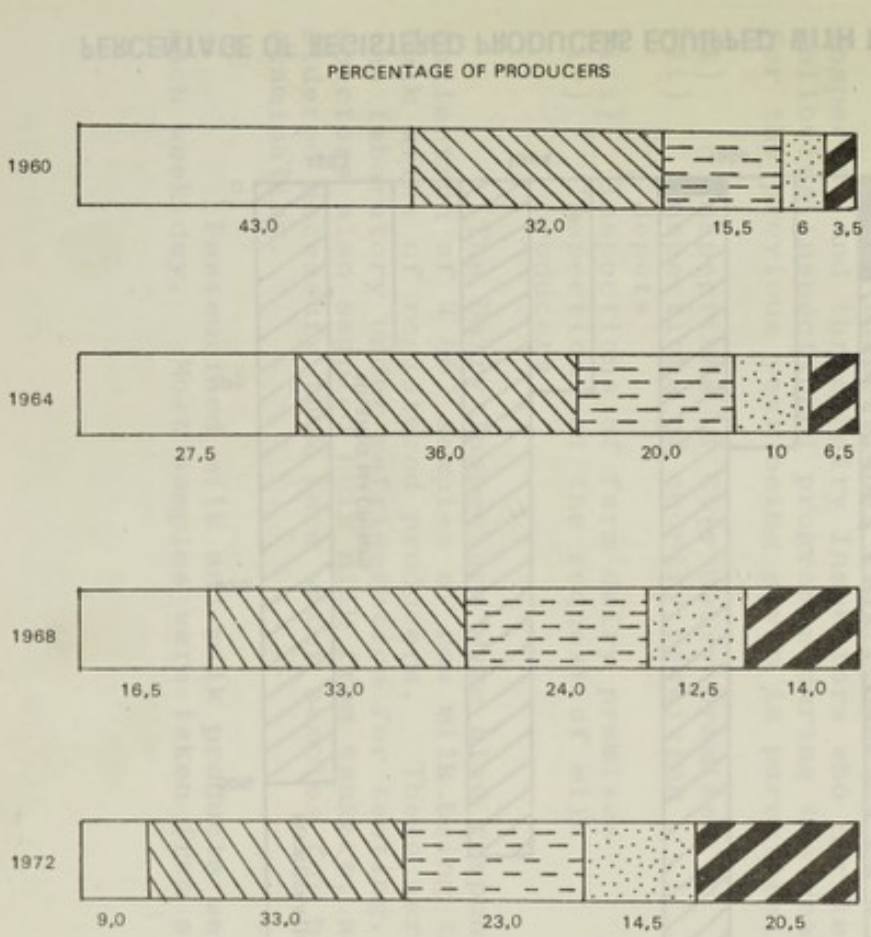
Two dairy factories are situated within the borough and one in a neighbouring municipal area. Frequent visits are paid to these plants and a constant scrutiny is kept on the standard of hygiene of personnel, equipment and premises. The factories' own laboratory staff maintain a constant quality control over their products, but this Department lends assistance in tracing the source of any post-pasteurisation contamination that occurs and ensures that the necessary corrective measures are taken.

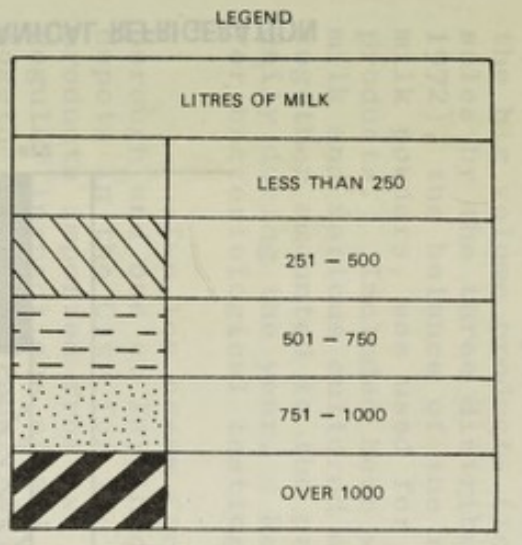
All staff at milk factories likely to come in contact with milk and milk products were Vi-tested and immunized against typhoid. A total of 571 persons were concerned.

It is of interest to note that only some 67% of pasteurised milk and approximately 65% of other milk products processed by the three dairy factories were consumed within the City. The remainder was sold in neighbouring towns and to shipping.

Also of interest was the continued growth of sales of milk in plastic bottles as opposed to glass bottles. During 1971, 72% of pasteurised milk was sold in glass bottles and 16% in plastic bottles, whereas during 1972 the figures were 63,5% and 25,5% respectively. This trend is not altogether welcomed as the bacteriological quality of plastic bottled milk is generally inferior, due not to the plastic bottles but to the complex bottle filling machinery which is required and which can be extremely difficult to clean and sterilise.

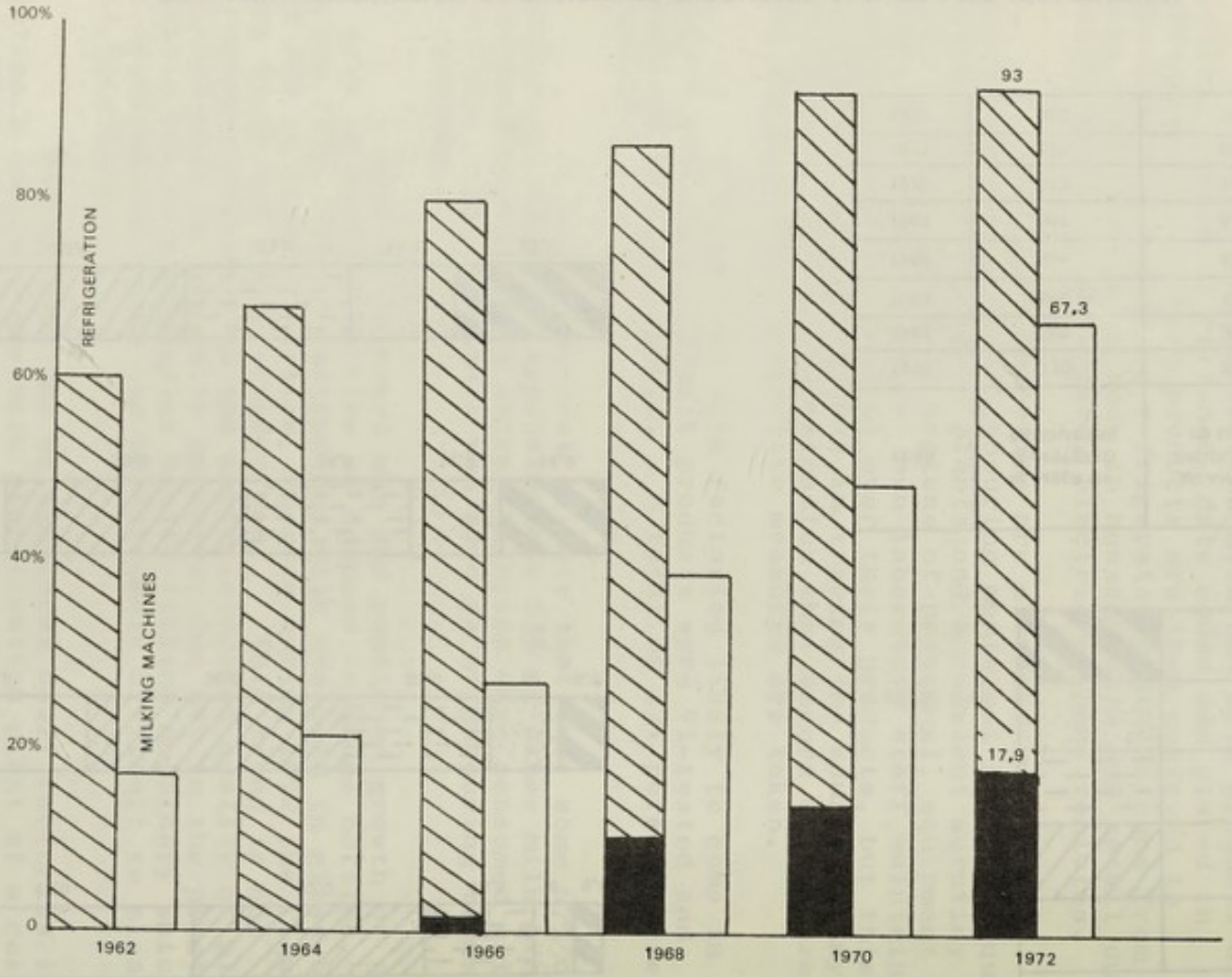
During 1972 one of the local dairy factories installed a complete new milk sterilisation plant at a cost in excess of R¼ million.




| YEAR | NUMBER OF REGISTERED PRODUCERS | MEAN DAILY PRODUCTION IN LITRES | MEAN DAILY INTAKE INTO DURBAN LITRES |
|---|---|---|---|
| 1960 | 710 | 327 | 152967 |
| 1962 | 659 | 345 | 164292 |
| 1964 | 600 | 433 | 183267 |
| 1966 | 596 | 480 | 204629 |
| 1968 | 567 | 571 | 221436 |
| 1970 | 517 | 649 | 252036 |
| 1971 | 520 | 683 | 270900 |
| 1972 | 502 | 707 | 281747 |

**DAILY MILK PRODUCTION OF REGISTERED PRODUCERS AND RELATED INFORMATION**




**PERCENTAGE OF REGISTERED PRODUCERS EQUIPPED WITH MILKING MACHINES AND MECHANICAL REFRIGERATION**

**(SHADED AREAS INDICATE FARM BULK TANKS).**

MILK PRODUCTS

While pasteurised and sterilised milk constituted the big volume products (together these accounted for daily sales by the three distributors of some 255 000 litres in 1972), the balance of the raw milk intake, supplemented by milk powders, was used for the manufacture of a variety of products. Included here were pasteurised cream and skim milk and various cultured and flavoured milk products which together amounted to the production of some 24 000 litres daily during the year. Regular sampling of these products for bacteriological testing was maintained.

Two ice cream factories are situated within the borough and one at Isipingo, and there are two ice cream depots in the City for the distribution of frozen milk products imported from two factories in the Transvaal. Regular inspections of all these premises were carried out together with the application of a routine sampling programme.

Scooped ice cream and soft dairy mix was sampled at restaurants and tea rooms to check on the hygiene of storing and serving these products. In 1972 there were more than 60 retail outlets for each of these frozen products. Establishments with a good bacteriological history were sampled relatively infrequently, greater attention being paid to those serving a product of a lower bacteriological quality.

INSPECTIONS AND LABORATORY CONTROL

The inspectional staff consists of a Senior Dairy Inspector and three Dairy Inspectors who carried out the following inspectional programme during the year, figures for the previous year being given in parenthesis :-

| | | | |
|---|---|---|---|
| (i) | Inspections of City dairy premises | 869 | ( 987) |
| (ii) | Inspections of country receiving depots | 302 | ( 263) |
| (iii) | Inspections of farm dairy premises | 1 607 | (1 603) |
| (iv) | Inspections at the request of milk producers | 151 | ( 180) |

The Dairy Inspectors were also responsible for the collection of 4 967 samples of raw milk being the individual bulk milks of registered producers. These were returned to the laboratory under refrigeration for testing. The inspectors also sampled bulk milk from tankers, and where considered necessary took farm water samples for bacteriological examination.

Pasteurised milk and milk products were sampled each week day. Most samples were taken from suburban depots

and, in the case of scooped ice cream and soft dairy mix, from cafes and restaurants. Samples taken directly from the factory lines were generally of far superior bacteriological quality indicating that ambient temperatures, especially in Durban's hot summer months, play a very big part in causing a deterioration of hygienic quality.

Two female laboratory assistants, under the guidance of the Veterinary Medical Officer, were responsible for all bacteriological and physical tests carried out in the departmental laboratory on milk and milk product samples, as well as various water and food samples.

Set out hereunder are statistics relative to milk production, sampling and laboratory testing :-

| A. Raw Milk Production | 1972 | 1971 |
|---|---|---|
| (1) Number of registered producers..... | 502 | (520) |
| (2) Mean daily milk production per herd..... | 707 litres | (683 litres) |
| (3) Mean daily volume consigned to local factories .... | 281 747 litres | (270 900 litres) |

B. Production of Heat-Treated Milk and Milk Products

| (a) Pasteurised Milk | Litres |
|---|---|
| (1) Mean daily production ..... | 227 530 (211 604) |
| (2) Mean daily volume sold within Borough ..... | 151 790 (148 284) |
| (3) Percentage sold within Borough. | 67% (70%) |
| (4) Percentage of production sold in:- | |
| (i) Glass bottles ..... | 63,5% (72%) |
| (ii) Plastic bottles.... | 25,5% (16%) |
| (iii) Cans ..... | 10,7% (11%) |
| (iv) Cartons..... | 0,3% ( 1%) |

| (b) Sterilised Milk | Litres |
|---|---|
| Mean daily production | 28 115 (26 860) |

(c) Ice Cream, Sorbet and Iced Milk Confections

Estimated mean daily consumption..... 17 500 litres

(d) Other Milk Products : Cream, Skim, Flavour and Cultured Milk etc.

| | | |
|---|---|---|
| (i) Mean daily production..... | 23 828 | (28 209) litres |
| (ii) Percentage sold within Borough | 65,5% | (67%) |

C. Sampling

1. Samples taken in terms of the Food, Drugs and Disinfectants Act and sent to the State Laboratory :-

| | | | |
|---|---|---|---|
| (a) | Milk | 138 | (144) |
| (b) | Cream | 35 | ( 36) |
| (c) | Ice cream | 48 | ( 48) |

2. Samples submitted to consultant City Pathologist for bacteriological examination :-

| | | | |
|---|---|---|---|
| (a) | Milk | 177 | (180) |
| (b) | Cream | 11 | ( 21) |
| (c) | Ice cream and Soft Serve | 23 | ( 30) |

3. Samples submitted to the State Health Laboratory for biological examination for tuberculosis :-

| | | |
|---|---|---|
| Raw Milk | 15 | ( 28) |

4. Samples submitted to the departmental laboratory :-

| | | |
|---|---|---|
| Raw bulked milk | 6 069 | (6 252) |
| Pasteurised and "actinised" milk | 1 132 | (1 024) |
| Pasteurised cream | 163 | ( 168) |
| Cultured products | 42 | ( - ) |
| Ice cream, iced confections, soft serve | 1 338 | (1 491) |
| Separated milk and flavoured milk | 171 | ( - ) |
| Sterilised milk | 24 | ( 22) |

D. Laboratory Tests Performed (Departmental Laboratory)

| | | |
|---|---|---|
| **Milk and Milk Products** | | |
| Presumptive coliform determinations | 3 621 | (3 413) |
| Coliform plate counts | 325 | ( - ) |
| Eijkmann tests for E. coli I | 1 896 | (1 377) |
| Plate counts (Astell roll-tube) | 3 412 | (3 400) |
| Thermoduric organism counts | 7 228 | (7 770) |
| Methylene Blue reduction tests | 334 | ( 129) |
| Resazurin reduction tests | 4 947 | (5 401) |
| Phosphatase tests (Aschaffenburg & Muller) | 2 830 | (2 829) |
| Brucellosis (stained antigen ring test) | 1 860 | (1 402) |
| Mastitis (direct cell estimation) | 4 959 | (5 611) |
| Mastitis antibiograms | 7 | ( 10) |
| Inhibitory substances (T.T.C. method) | 6 069 | (6 258) |
| Sterilised milk | 24 | ( 22) |
| Examinations for salmonellae | 196 | ( 361) |
| Sediment tests (performed at depots) | 4 384 | (4 301) |
| **Prepared Foods** | | |
| Enterobacteria and staphylococcal identification, and Eijkmann tests | 66 | ( 113) |
| **Water Samples** | | |
| Membrane filter (coliform and E.coli I counts | 522 | ( 276) |
| Rinse samples (presumptive coliform and total counts) | 162 | ( 190) |

E. Results of Tests on Producer (Farm) Milk

| Test | No.of Samples | % Satisfactory |
|---|---|---|
| Resazurin (one hour) | 4 947 (5 342) | 96% (95%) |
| Visible dirt | 4 384 (4 284) | 93% (91%) |
| Inhibitory substances(T.T.C.) | 4 966 (5 350) | 99% (98%) |
| Thermoduric count | 4 975 (5 374) | 81% (82%) |
| Mastitis (direct cell count) | 4 959 (5 342) | 94% (93%) |
| Brucellosis (stained antigen) | 1 860 (1 397) | 94% (93%) |

Note: The standards applied in interpreting the above tests were:-

One hour resazurin test - fail if disc reading below 2½;

thermoduric organisms - unsatisfactory over 50 000/ml;

mastitis - herd mastitis situation serious if cell count exceeds 1 million cells/ml.

F. Results of Tests on Heat-Treated Milk and Milk Products

| | | Test and Percentage Satisfactory | | | | |
|---|---|---|---|---|---|---|
| | No.of Samples | Plate Count | Thermo-duric Count | Phospha-tase Test | Presump-tive Coliform | Eijkmann Test |
| a.Pasteur-ised Milk | | | | | | |
| i Bottled | 519 (648) | 83% (70%) | 76% (70%) | 100% (100%) | 79% (82%) | 97,3% (98%) |
| ii Plastic | 375 (240) | 90% (80%) | 85% (75%) | 100% (100%) | 91% (90%) | 99,5% (99%) |
| iii Can | 113 (136) | 86% (70%) | 76% (69%) | 100% (100%) | 84% (78%) | 99% (100%) |
| b.Cream | 163 (168) | 92% (93%) | | 100% (100%) | 76% (77%) | 95,7% (90%) |
| c.Ice cream & Sorbet | | | | | | |
| i Factory | 374 (454) | 98% (92%) | | 100% (100%) | 83% (81%) | 100% (100%) |
| ii Retail outlets | 335 (407) | 86% (80%) | | 100% (100%) | 55% (57%) | 98,2% (99%) |
| iii Soft dairy mix | 486 (450) | 90% (72%) | | 100% (100%) | 63% (63%) | 98,5% (99%) |
| iv Iced con-fections | 143 (180) | 97% (90%) | | 100% (100%) | 86% (67%) | 99,3% (99%) |
| d.Flavour Milk | 156 | 97% | | | 75% | 94,9% |
| e.Separa-ted Milk | 67 | 78% | | 100% | 65% | 94,1% |
| f.Cultured Milk | 92 | | | 100% | 81% | 92,4% |
| g.Actinised Milk | 53 | 100% | | 100% | 80% | 100% |

## DISEASES AFFECTING DAIRY STOCK AND MILK SUPPLIES

### Mastitis

Routine cell counting of herd milks revealed that 6% of herds suffered from a serious degree of mastitis. It may, however, be more accurate to venture that probably no more than 25% of the dairy herds tested had the disease under reasonable control. Most mastitis is of the sub-clinical form so that producers are often not aware of the extent of the problem in their herds, even though milk quality and volume of production are detrimentally affected. Mastitis is undoubtedly the most important disease of dairy cattle from the economic point of view.

This Department made a serious attempt to help progressive producers to contain the disease by advising them and their veterinarians of cell count results and following this up with advice on control measures. Some producers have seen gratifying results, but many appear to be discouraged by the fact that worthwhile results are not achieved in the short term.

### Bovine Tuberculosis

Figures obtained from the Division of Veterinary Services revealed that at the end of June 1972 there were 393 accredited tuberculosis-free herds in Natal and East Griqualand, an increase of 30 herds over the previous year's figure. Some 81 000 cattle were tuberculin tested in the year ended June 1972, and 356 gave positive or doubtful reactions.

Following on abattoir returns of tuberculosis in cattle, this Department sent 15 bulk milk samples for biological testing to the State Laboratory, all with negative results.

### Brucellosis

Of the 1 860 samples of raw milk tested, approximately 6% gave a positive reaction to the Ring test. Of the 8 188 serum agglutination tests done at Allerton Veterinary Diagnostic Laboratory some 16% were positive or doubtful for brucellosis. The State inoculation campaign against this disease met with a greater measure of success during the year as a total of 111 835 cattle inoculations were recorded, compared with only 41 479 in the previous year.

### Other diseases and conditions

The most important diseases limiting milk production, other than mastitis, are undoubtedly infertility (due to venereal infections or nutritional deficiencies, especially phosphate and Vitamin A) and internal parasitism which is

extremely difficult to control with the increasing use of artificial pastures. The greatest single cause of adult bovine mortality is Babesiasis, a tick-borne disease, and this may be due to a decline in dipping efficiency since the eradication of East Coast Fever.

## XI. PROSECUTIONS

Legal proceedings instituted by this Department for contraventions of health statutes, regulations framed thereunder or local bylaws are processed by the City Police Department, and in respect of cases falling under the jurisdiction of the District of Durban are prosecuted by a member of the staff of that Department and are regarded as private prosecutions in consequence.

It is a matter for regret that the City of Durban falls within the three magistracies of Durban, Inanda and Pinetown as the suburbs of Newlands and kwaMashu Bantu Township come under the Magistrate of the Inanda District, who sits at Verulam and also holds court within kwaMashu, whilst some parts of the western suburbs come within the District of Pinetown which has a sub-court at Chatsworth. It is to be hoped that the day is not far distant when the boundaries of these magistracies will be reviewed.

During 1972 all departmental prosecutions finalised were instigated by the Dairies, Environmental Sanitation, Food Hygiene and Housing branches of the Health Inspectorate, as per the subjoined schedule, and were dealt with through the Durban Magistrates' Court except for eight cases in the Pinetown (including Chatsworth) Magistrates' Court and three in the Verulam (including kwaMashu) Magistrates' Court :-

| Contravention | Admitted Guilt | Found Guilty | Fines Paid | Remarks |
|---|---|---|---|---|
| | | | R | |
| Public Health Act: | | | | |
| Contaminated milk | 2 | | 60,00 | |
| Contaminated food | 3 | | 110,00 | |
| Food, Drugs and Disinfectants Act | | | | |
| Substandard boerewors | 1 | | 40,00 | |
| Substandard vienna sausages | 3 | | 110,00 | |
| Preservative in minced meat | 4 | | 90,00 | |
| | | | | One case withdrawn |
| Slums Act: | | | | |
| Breach of Slums Court order | 1 | | 30,00 | |

| Contravention | Admitted Guilt | Found Guilty | Fines Paid | Remarks |
|---|---|---|---|---|
| | | | R | |
| Public Health Bylaws: | | | | |
| Unclean conditions | 13 | | 355,00 | |
| | | 2 | 45,00 | (i) R30,00 or 30 days;<br>(ii)R15,00 or 10 days. |
| | | | | One case withdrawn |
| Fly breeding | 4 | | 110,00 | |
| | | 1 | 15,00 | Or 15 days |
| Mosquito breeding | 2 | | 30,00 | |
| Defective drainage | 6 | | 185,00 | |
| | | 3 | 70,00 | (i) R40,00 or 40 days;<br>(ii)R10,00 or 10 days;<br>(iii)R20,00 or 20 days. |
| Building defective | 7 | | 220,00 | |
| | | 1 | 100,00 | Or 90 days. |
| Absence of refuse receptacle | | | | One case withdrawn |
| Food Bylaws: | | | | |
| Unclean conditions | 13 | | 410,00 | |
| | | 4 | 140,00 | (i) R40,00 or 40 days;<br>(ii) R10,00 or 10 days;<br>(iii)R50,00 or 50 days;<br>(iv) R40,00 or 40 days. |
| | | | | Two cases withdrawn. |

| Contravention | Admitted Guilt | Found Guilty | Fines Paid | Remarks |
|---|---|---|---|---|
| Food Bylaws (cont.) | | | R | |
| Food exposed to contamination | 19 | | 535,00 | |
| | | 5 | 85,00 | (i) R10,00 or 10 days;<br>(ii) R20,00 or 20 days;<br>(iii) R15,00 or 10 days;<br>(iv) R20 or 20 days;<br>(v) R20,00 or 15 days. |
| | | | | One case not guilty. |
| Personal apparel in food room | 3 | | 60,00 | |
| | | 1 | 20,00 | Or 15 days. |
| | | | | One case withdrawn |
| Absence of clean towels, nail brushes and soap | 2 | | 45,00 | |
| | | 1 | 20,00 | Or 20 days |
| | | | | One case withdrawn |
| Absence of protective clothing | 3 | | 60,00 | |
| | | 1 | 15,00 | Or 10 days |
| Inadequate hot water | 2 | | 40,00 | |
| | | 1 | 10,00 | Or 10 days |
| Unrefrigerated food | 3 | | 70,00 | |
| | | 1 | 20,00 | Or 20 days |
| Unregistered vehicle | 6 | | 95,00 | |
| | | 2 | 50,00 | (i) R30,00 or 20 days;<br>(ii) R20,00 or 15 days. |

| Contravention | Admitted Guilt | Found Guilty | Fines Paid | Remarks |
|---|---|---|---|---|
| | | | R | |
| Food Bylaws (cont.) | | | | |
| Unclean vehicle | 2 | | 70,00 | |
| | | 2 | 45,00 | (i) R30,00 or 20 days; (ii) R15,00 or 10 days. |
| Building in disrepair | 7 | | 165,00 | 1 case withdrawn |
| Milk (and Milk Products) Bylaws: | | | | |
| Sale of unregistered product | 1 | | 30,00 | |
| Milk substandard | 5 | | 190,00 | |
| Ice cream substandard | 8 | | 230,00 | |
| Dry Cleaners and Dyers Bylaws: | | | | |
| Unclean conditions | 4 | | 80,00 | |
| Building Bylaws: | | | | |
| Sanitary accommodation absent | 4 | | 120,00 | |
| General Bylaws: | | | | |
| Unauthorised dumping | 31 | | 840,00 | |
| | | 5 | 100,00 | (i)R20,00 or 20 days; (ii)R25,00 or 25 days; (iii)R5,00 or 5 days; (iv)R30,00 or 30 days; (v)R20,00 or 20 days. |
| Pinetown Court (including Chatsworth Court) - 8 cases | | | | |
| Verulam Court (including kwaMashu Court)- 3 cases | | | | |
| | 159 | 30 | 5115,00 | |

Supreme Court Appeal : Vicarious Responsibility:

A case was heard by a magistrate in April, 1972, when both accused were found not guilty on a charge of contravening the Food Bylaws in that they, being persons carrying on a business involving the sale of food, caused or permitted food to be stored without being effectively protected against contamination where there was a reasonable possibility of it becoming contaminated by flies, dirt, dust or any other cause. The reason given by the magistrate for his decision was that both accused were not present when the inspection of the "stall" in the Indian Market took place at the time of the alleged offence.

The accused were prosecuted previously under similar circumstances when the City Council successfully defended an appeal against conviction in the Magistrate's Court. In the Supreme Court judgement on that occasion the opinion was held that the circumstances pointed to the legislature having intended to impose strict liability upon the person carrying on business and the appeal must therefore be dismissed.

The City Council entered an appeal in the current case on 23rd October when the Natal Provincial Division of the Supreme Court again found in its favour and held that the Food Bylaws were conceived to protect the public health; that strict liability was imposed on the appellants, and that accordingly mens rea was not an essential ingredient of the offence. An order was made setting aside the Magistrate's decision discharging the accused and it was further ordered that the case be remitted to the Magistrate to hear the remainder of the case, which is still pending.

## XII. ALLIED HEALTH SERVICES

Acknowledgment is due to the City Engineer, the Director, Municipal Abattoir and the Director, Parks, Recreation and Beaches for contributing the following information concerning services undertaken by their respective Departments which have a direct bearing upon the public health of the City.

### ENGINEERING SERVICES

### A. WATER

The major water source, Nagle Dam, supplied water with very little change in composition and produced a high quality water after treatment.

Shongweni Dam remained full during the first half of the year but, due to poor rains, dropped to 50% storage capacity at the end of the year. The reduction in storage produced some mineral enrichment and with thermal stratification and eutrification resulted in increased treatment costs and reduction of throughput at the treatment works. The quality of the treated water was nevertheless maintained to Class A as defined by the S.A.B.S.

The treated water in the City's reticulation system has been tested regularly throughout the year to monitor the chemical and bacteriological quality. There has been an improvement in quality of water and the number of occasions in which total organisms were found to be present was lower than the previous year. The average yearly residual chlorine level in the reticulation system has improved.

Re-chlorination of water supplied to the Mobeni reservoir was started in March and has resulted in residual chlorine levels at the reservoir being satisfactorily maintained.

#### Raw Water Aqueducts

The construction of the fourth aqueduct from Nagle Dam to the Durban Heights Purification Works was completed in September 1972. The fourth aqueduct, which involved the duplication of 15,3 km of pipeline between the existing 21,2 km of tunnels on the third and fourth aqueduct system from Nagle Dam to the Durban Heights Purification Works by 182 megalitres per day to a total of 591 megalitres per day.

Durban Heights Purification Works

The construction of the 205 megalitre per day extension to the Durban Heights Purification Works commenced in March 1972. The completion of the first 20% of the extension is programmed for May 1973, and will provide an additional 41 megalitre per day capacity. The remainder is due for completion in March 1974.

Service Reservoirs

In the programme of providing increased storage capacity, an additional 25 megalitre compartment to the existing reservoirs at the Northdene Purification Works and the 11,5 megalitre reservoir in the Sea Cow Lake area were completed.

Trunk Mains

The first stage of the augmentation of the bulk water supply to the kwaMashu and Ntuzuma Bantu Townships was commenced with the installation of 1 000 m of a new 825 mm main in Newlands Township. The augmentation of this bulk water supply will be undertaken progressively section by section as and when the demand requires.

Various trunk main relays have been undertaken in connection with the construction of the Outer Ring Road.

Reticulation

Development of the City's water distribution system has continued commensurate with the demand for water in various parts of the City.

Mains extensions have been completed in the designated development areas of Brickfield Hoosen, Randgebied, and Umgeni Park (areas being planned by the Department of Community Development), and work has commenced in the areas of Prospect Hall (also Department of Community Development) and Kenhills.

Water Metering

In pursuance of the Council resolution of the 9th March, 1970, that all water supplied to domestic premises in the City be metered and upon the promulgation of the necessary amendments to the Waterworks Bylaws with effect from 1st May, 1971, the installation of meters commenced and work programmed over a period of 4 years. At the end of the year under review, some 26 000 meters representing 43% of the total programme, had been installed. Metered areas include residential areas North of the Umgeni River and the South of the City embracing the Bluff, Wentworth, Montclair, Woodlands, Sea View, Hillary and Chatsworth. It is already evident that metering in these residential areas has been responsible

for a reduction of excess water consumption and waste through previous neglect of leaks on private property. This reduced waste and leakage may be expected to bring about a corresponding decrease of seepage and ponding of water on private properties and the Council's street drainage systems.

Water Treatment

The results obtained from the bacteriological examination of samples of water supplies at source or inlets to treatment works, expressed as percentages, are set out below :-

| Faecal E. coli per 100 ml | UMGENI RIVER | UMLAAS RIVER | |
|---|---|---|---|
| | Inlet to Nagle Dam % | Shongweni Water Works % | Umlaas Filtration Works % |
| 0 | 11 | 6 | 0 |
| 1 - 2 | 5 | 0 | 0 |
| 3 - 10 | 5 | 16 | 0 |
| 11 - 25 | 5 | 0 | 0 |
| 26 - 100 | 47 | 18 | 18 |
| 101 - 200 | 11 | 41 | 18 |
| 201 - 500 | 16 | 23 | 35 |
| 501 - 1000 | 0 | 0 | 11 |
| Over 1000 | 0 | 6 | 18 |

A summary of the chemical analyses of water at the several treatment works, from the two sources of Durban's supply, is set out below :-

| Analysis | Umgeni River | Umlaas River |
|---|---|---|
| pH | 7,4 | 7,2 |
| pHs | 9,2 | 8,8 |
| Colour (Hazen units) | 18 | 14 |
| Conductivity (micromhos) | 82 | 240 |
| Turbidity (ppm) | 10,5 | 11,5 |
| Parts per million of: | | |
| Total dissolved solids | 45 | 163 |
| Chlorion (Cl) | 14 | 41 |
| Iron (Fe) | 0,41 | 0,20 |
| Silica ($SiO_2$) | 13 | 14 |
| Ammoniacal Nitrogen | 0,02 | 0,02 |
| Nitrate Nitrogen | 0,2 | 0,4 |
| Permanganate Value: 4 hours | 1,5 | 1,4 |
| Free Carbon Dioxide | 2,3 | 7,67 |
| Hardness as $CaCO_3$ (ppm): | | |
| Total | 29 | 58 |
| Calcium | 17 | 31 |
| Non-carbonate | 0 | 11 |
| Carbonate | 29 | 46 |
| Soda Alkalinity | 5 | 1 |
| Total Alkalinity | 33 | 47 |

## Swimming Bath Waters

The swimming baths under the control of the Department of Parks, Recreation and Beaches and the Department of Bantu Administration were visited regularly throughout the year. The chemical and bacteriological quality of the water was checked and the Beach Supervisors advised on any necessary treatment. The quality of the water has been good. With the commissioning of the new filtration plant at the Beach Paddlers and Toddlers Pool the quality improvement has been gradual and with efficient operation suitable chlorine residuals can be maintained in both ponds. A new bath at Chatsworth was included in the sample schedule during the year.

## Bathing Beach Waters

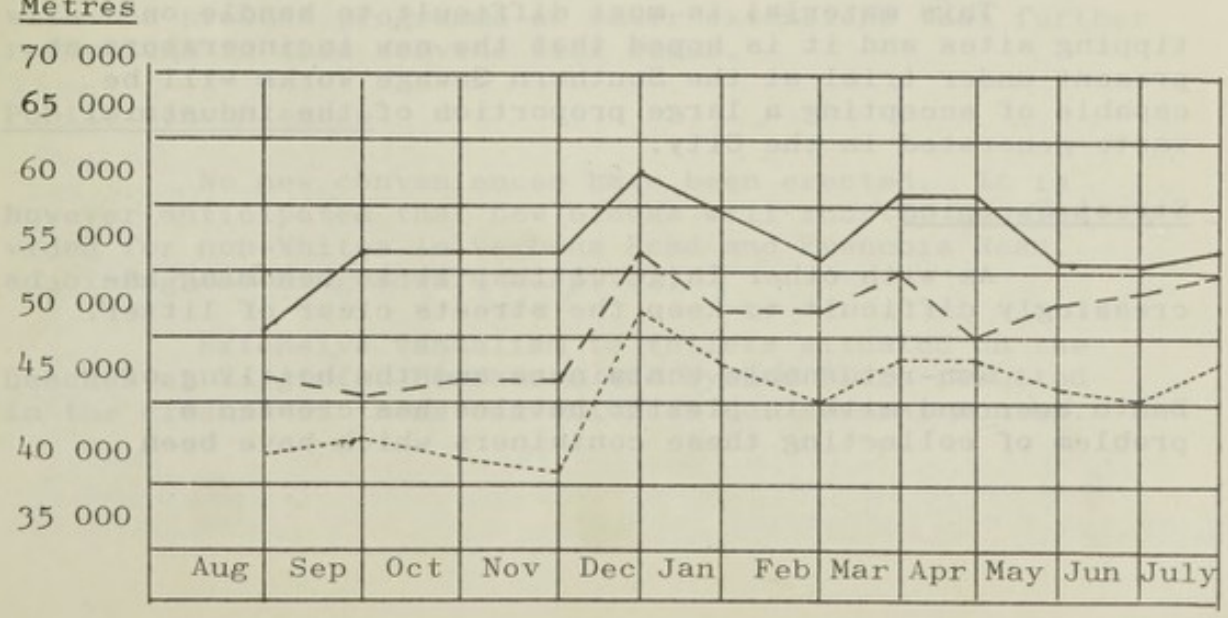
Beach pollution continues to be monitored by the Chemical Branch, City Engineer's Department and by the National Institute for Water Research (C.S.I.R.) in its contract programme for the Monitoring of Durban's Sewage Sea Outfalls. The state of the beaches has improved considerably since discharge through the outfalls at North Pier ceased and discharge from the outfall at Finnemore Place was considerably reduced.

All bathing beaches are within the limits of the Californian standards.

## B. PUBLIC CLEANSING SERVICES

### Refuse Removal

The City is divided into 55 regular refuse runs. The graph below, indicated the increase in refuse collected over the years 1969/70, 1970/71 and 1971/72, together with the seasonal increases in the holiday periods December and July :-



This increase in the amount of refuse collected is attributed to the natural growth, to the increased use of packing and is a problem being faced by all large local authorities.

The present collection of refuse is by use of a skep. It is common knowledge that this method of collection tends to create spillage and is far from hygienic but the high cost of alternate systems has, up to now, forced a continuation of this method.

The development of a cheap disposable plastic bag resulted in experiments being undertaken in three separate areas of the City. Arising from those experiments it has been calculated that, without any additional expenditure, and possibly at a reduced cost, it would be possible to provide a disposable bag for each householder on each occasion that refuse is cleared.

The City Council has approved this system and it is hoped to have the entire City operating with disposable bags by the end of the next financial year.

Refuse Disposal

This is still by land fill at the disposal sites at Lamont and Springfield.

During the year legislation was introduced for a charge to be levied for the acceptance of industrial waste either to Municipal tipping or incinerator sites. The present tariff for the acceptance of this material being:-

Solid Waste

per 100 kilograms or part thereof - R0,50

Liquid Waste

per 200 litres or part thereof - R1,00

This material is most difficult to handle on tipping sites and it is hoped that the new incinerators at present under trial at the Southern Sewage Works will be capable of accepting a large proportion of the industrial waste generated in the City.

Street Sweeping

As with other large cities, it is becoming increasingly difficult to keep the streets clear of litter.

Non-returnable containers and the bottling of Bantu beer and milk in plastic bottles has created a problem of collecting these containers which have been

discarded into the City streets. Besides being an eyesore, these containers find their way into stormwater inlets, and cause blockages with consequent stormwater damage.

The City employs 500 labourers, primarily Asiatics, to maintain the roads in a clean condition. The commissioning of two mechanical sweepers in 1969/1970 proved unsuccessful and due to high maintenance costs together with excessive driver time it has been decided while labour is available, to continue to use manual labour for this work.

The use of plastic bags, together with a purpose designed cart, has been of great assistance. Bags are filled by street sweepers and placed on the roadside for collection by Indian Sirdars driving light vehicles or by the refuse collection vehicle on its normal rounds.

In an endeavour to curtail the littering of the City streets the City Council conducted an Anti-Litter Week during the year. Following press and radio publicity, enforcement officers comprising the City Police, Cleansing/ Building Inspectors and Parks personnel issued spot fines to individuals contravening the Bylaws.

The response was good and a marked improvement in the City streets was noted. As a result thereof, the Works Committee adopted a resolution recommending the formation of a permanent anti-litter squad.

Night Soil

The provision of reticulated sewerage to outlying areas has reduced the number of pails supplied. In June 1971, 142 461 pails were serviced whereas in June 1972, 122 129 were serviced indicating a reduction of services to 1 400 properties.

To carry out this function 14 runs are conducted daily and 126 labourers are employed. It is hoped that with the present programme of sewer extensions that further reductions in this service will occur.

Public Conveniences

No new conveniences have been erected. It is however anticipated that new blocks will shortly be provided for non-Whites in Verbena Road and Francois Road, adjoining the King Edward Hospital.

Extensive vandalism to toilets situated on the beaches at Virginia, Beachwood and Wyeham Place resulted in the closure of these conveniences for several months.

Repairs have now been carried out together with the erection of iron gates. To avoid further vandalism these toilets are locked from 5.00 p.m. to 6.00 a.m.

D. AIR POLLUTION

On the 1st September, 1972, the Air Pollution Section and the Trade Effluent Section of the City Engineer's Department were merged to form the Pollution Control Section. The two Inspectorate staffs have retained their separate identity but they now both come under the control of the same professional officer which facilitates a more co-ordinated approach to industry on all aspects of pollution control.

During the year under review, the Pollution Control Section continued to monitor all sources of air pollution including industry, commerce, locomotives, shipping and road vehicles. Pollution control from stationary fuel-burning appliances continues to operate at a satisfactory level, excepting those cases where complaints were received and advice and stoker demonstrations had to be given to preclude further complaints. Mobile power sources, in particular locomotives and buses, still give rise to concern, despite the stalwart efforts of the South African Railways' own Smoke Inspector to contain the locomotive problem. There are currently some 150 coal-fired locomotives operating in Durban and it is obviously impossible for one inspector to be in a position to control all of these all of the time. The diesel smoke control powers embodied in the Atmospheric Pollution Prevention Act are being used to good effect in Durban, but, here again with mobile pollution sources it is difficult to control all vehicles all of the time. Furthermore, with the increasing cost of repairs to mechanical vehicles, there is unfortunately an increasing incentive for certain small operators to risk being caught for smoke emission rather than pay for corrective maintenance and repairs.

E. TRADE EFFLUENT

Trade Effluent Control continued throughout the year with the monitoring and analysis of industrial effluent to ensure that there were no serious discharges to sewer or stormwater. This ensures protection of the sewers and drains, of the people working therein, of the equipment and bacteriological processes at the Sewage Works, and prevents pollution of the rivers, bay and the sea, which receives the final discharge. The analytical results for all trade effluent samples are computerised and used to calculate the trade effluent charges which are reviewed twice a year for all firms. Close liaison is maintained with industrialists in this regard and this has resulted in their greater awareness of the pollution problems of a large city and secured their co-operation regarding better housekeeping on their own industrial premises. Regular inspections of

the bay are undertaken to ensure that there is no unwarranted pollution from stormwater drains discharging into the bay and close co-operation is maintained with the harbour authorities via the Durban Harbour Area Pollution Liaison Committee. The Section also compiles records of the incidents of offshore oil slicks and oil pollution of beaches throughout Durban.

Joint control of the two Sections has facilitated the processing of applications for Trade Licences, Offensive Trade Permits and Building Plans which are checked to ensure that adequate provision is made for Pollution Control. Many of these applications were referred back for modification to meet the Department's requirements in this regard. While the expenditure involved in meeting these requirements causes some concern in certain quarters, the increasing public awareness of the need for stringent pollution control measures in any city of Durban's size and complexity, facilitates the acceptance of pollution control principles.

F. PROGRESS WITH 18 YEAR PLAN OF SEWERAGE RETICULATION

Further progress, albeit at a slower rate, was made with the construction of sewerage reticulation in various parts of the City, and contracts covering the following areas were completed during the year :-

Puntan's Hill area Stage I, Park Station Road/Workington Road area, Rosary Road/Park Station Road area, Morewood Road area, Bellair/Sea View area Stage III, Portion of Clare Estates, Glendale Road/Dickens Road area and Dale Road area (Howardene).

Contract work was still progressing with the following areas at the end of the year :-

Portion of Reservoir Hills and Broadway area.

In addition, Departmental work was in progress at Parkhill (Stages III and IV) and in the Brickfield Road area at the end of the year.

G. TRUNK SEWERS

(i) Negotiations in connection with the servitude required through the Stainbank Nature Reserve reached finality during the course of the year, but no progress on construction was possible.

Construction of the Woodlands Tunnel between Nottingham Road and Yellowwood Park continued.

On the Umbilo Trunk Sewer, work on the Umhlatuzana River Crossing and the Umbilo River Crossing was completed, and after the conclusion of protracted negotiations

with the Natal Provincial Administration, the stretch of the trunk sewer which crossed a proposed school site at Carrington Heights has been laid.

On the Mayville Trunk Sewer, the section between Andhra Road and Booth Road was completed, while the section from Booth Road to Jan Smuts Highway awaits only the laying of a short gap, held up due to servitude difficulties.

The first stage of the Booth Road Main Sewer was commenced during the year.

Work continued on the section of the Durban North Trunk Sewer between Prospect Hall Road and the Japanese Gardens, on the first stage of the Unhlangane Trunk Sewer, on the Inanda Road Trunk Sewer, and on portion of the Umgutulu Trunk Sewer.

On the Bluff, Stage II of the Wentworth Trunk Sewer was completed, while in the area South of the Umlaas Canal the construction of a main sewer and a rising main was also completed.

(ii) Waste Water Treatment Works

Following commissioning of the biological treatment plant a supply of effluent, purified to a re-use standard, has been made available to the Mondi Paper Mill adjacent to the Southern Works.

Work is proceeding on the up-rating of the Point Waste Water Pumping Station and work is in hand at the Central Works for the installation of mechanically raked screens.

Construction of 2 primary sedimentation tanks together with the provision of mechanically raked screens and additional grit removal units is well in hand at the Southern Works.

Arising from projected housing scheme development at Ntuzuma and Phoenix, to the north of the City, major extensions to the kwaMashu works were commenced early in the year and completion of the first stage is anticipated early in 1974.

This will increase the capacity to 64 000 cubic metres per day of an effluent suitable for discharge to river.

(iii) The Ocean Outfalls

The two ocean outfalls (150 000 cubic metres per day capacity at Central Waste Water Treatment Works, and 250 000 cubic metres per day at the Southern Works)continues

to discharge under the surveillance of the Monitoring Committee. The present average rates of outflow are 106 000 cubic metres per day at Central Works and 104 500 cubic metres per day at Southern Works.

ABATTOIR SERVICES

Following a record number of slaughterings for all species of animals handled at this abattoir during 1971, there has been a drastic reduction of sheep and goat offerings during 1972. This may be attributed to the effects of drought and overstocking of certain sheep raising areas, where in order to conserve grazing and prevent erosion, destocking schemes were introduced. In addition an outbreak of enzootic abortion has seriously disrupted lamb production and it is unlikely that the sheep population will increase to previous levels for a number of years. The demand for mutton as a foodstuff is however constantly on the increase, but our present supplies are insufficient to meet this. Following popular demand, the Government have introduced supplementary supplies of mutton from Australia, in an effort to ease the shortage. Quantities of frozen mutton already introduced have been quite insufficient to meet the local demands, and it would appear that the shortage of this type of meat is being augmented by increasing the demand for other types of meat such as beef, pork and white meats. Fortunately supplies of beef, pork and veal have been ample and in fact abattoir throughput calculated in cattle units have increased by ± 6% during this year, and if slaughtering facilities were available to handle more livestock this throughput could well have been greater.

Animals slaughtered and carcases condemned at the Municipal Abattoir during 1972 are reflected below:-

| Animal | Slaughtered | Carcases Condemned | Cysticercosis Carcasses passed conditional upon freezing |
|---|---|---|---|
| Bovines: | | | |
| Mature | 193 876 (171 444) | 1 403 | 3 976 |
| Calves | 17 817 ( 17 681) | 1 483 | 44 |
| Swine | 110 467 (102 453) | 2 893 | 561 |
| Sheep | 685 620 (984 069) | 2 841 | - |
| Goats | 41 928 ( 30 928) | 401 | - |
| Total | 1 049 708 (1 306 575) | 9 021 | 4 581 |

The high prices of all types of meat are ample indication that insufficient animals are being slaughtered to meet the needs of the area of supply, and are partly due to ever increasing operational costs which have to be borne by the meat industry.

In order to alleviate the position the Abattoir Commission have authorised extensions to the existing Abattoir, which are already well advanced. On completion these extensions will increase throughput by approximately 30% and it is felt that this throughput will serve the regional meat requirements of the area until the new abattoir, which is being planned, is completed.

It is estimated that the costs of these extensions to the existing abattoir will exceed R750 000. The recovery of this money over a relatively short period together with the increased operational costs has already had to be budgeted for and as a result abattoir tariffs have had to be increased by approximately 100%.

Every effort has been made to maintain the project as a viable undertaking and besides providing facilities for increased slaughterings, additional pens have been included in the project in order to increase holding capacity, also a new by-products section to manufacture carcass meal from condemned material is being constructed. This plant is the first of its type to be installed in the Republic and, based on findings where similar plants are being operated in Australia, is very economical in operation. The products which are manufactured in this section i.e. carcass meal, blood meal and tallow are sold by public tender and the income thus derived accrues to Abattoir revenue and thus serves to offset the present high marketing costs.

Whale meat which is processed and packaged by the Union Whaling Company in their own premises is allowed to be marketed in the City. This however is subject to strict control measures which have been imposed by the City Medical Officer of Health and Government Authorities. The whaling company operate their own laboratory service and this meat is subject to veterinary inspection on their premises prior to entering the city and may only be distributed after a secondary inspection which is conducted at the Municipal Abattoir. This meat is marketed for both human and pet consumption and during the year under review 188,900 kg, was inspected and passed.

A new abattoir to replace the existing abattoir is to be erected at Cato Ridge and is expected to be operational by 1975. The project is planned to serve initially the needs of both the Pietermaritzburg and Durban areas of supply together with certain areas along the Coast, North and South of Durban.

This project is being erected by the Abattoir Commission and will be operated by this body as the Durban City Council have indicated that they are not interested in providing this costly regional facility.

## DISPOSAL OF HUMAN REMAINS

### Public Cemeteries:

(a) White Community

Stellawood continued to be the major cemetery for Whites but it is anticipated that the remaining burial sites will be exhausted in approximately 5 years' time. Red Hill cemetery will then become the major White cemetery and adequate land will be available for that purpose provided an alternative cemetery can be developed in the near future for the disposal of deceased Bantu.

During the 1971/72 financial year the numbers of deceased White persons interred were as follows :-

| | | |
|---|---|---|
| Stellawood | - | 781 |
| Red Hill | - | 58 |
| Umgeni | - | 4 |
| Hillary | - | 17 |
| West Street | - | 35 |
| Sydenham | - | 2 |
| TOTAL | | 897 |

(b) Indian Community

Available sites are limited and there is a need for additional burial areas to be developed in the very near future and this is being given consideration.

The following deceased persons of the Indian group were interred during the 1971/72 financial year :-

| | | |
|---|---|---|
| Red Hill | - | 345 |
| Cavendish(Chatsworth) | - | 387 |
| Hillary | - | 17 |
| West Street | - | 124 |
| Kenilworth | - | 76 |
| Springfield | - | 50 |
| Stellawood | - | 47 |
| Sydenham | - | 6 |
| TOTAL | | 1 052 |

(c) Bantu Community

6 101 deceased Bantu were interred during the 1971/72 financial year, 5 349 of the burials taking place at Red Hill cemetery.

This department has reported to the Amenities Committee expressing great concern at the acute shortage of land for Bantu interments and the need to develop large

new areas of land for that purpose. The situation has been slightly alleviated by the opening of a cemetery at kwaMashu for residents of that township but the development of further Bantu cemeteries remains a matter of urgency.

The following Bantu interments took place during the 1971/72 financial year :-

| | | |
|---|---|---|
| Red Hill | - | 6 074 |
| Hillary | - | 61 |
| Mayville | - | 690 |
| Stellawood | - | 1 |
| Total | | 6 826 |

Private Cemeteries

Returns are submitted monthly to this Department giving details of the interments undertaken.

Crematoria

The number of cremations undertaken during the 1971/72 financial year represented an increase over the previous year of approximately 12%.

Details of cremations are as follows :-

| | | |
|---|---|---|
| Stellawood Crematorium (White) | - | 2 057 |
| Clare Estate (Indian) | - | 497 |
| Cato Manor | - | 271 |
| Total | | 2 825 |

Pauper Burials

Only 16 White and 10 Indian pauper burials were undertaken during the year, but of the 6 101 Bantu interred the vast majority were of pauper status.

## XIII. GENERAL

### CONFERENCES

During 1972 this Department was represented at a number of general meetings of various organisations and symposia arranged by technical authorities, mention being made of those away from Durban and a few of the local events of importance.

The City Medical Officer of Health attended the International Medical Congress in Bulawayo from 2nd to 8th September, the Symposium on High Density Housing in Johannesburg from 26th to 28th September and the Biennial General Meeting of the South African National Council for Mental Health held in Bloemfontein on 19th and 20th October.

He also lectured at the Medical School to fifth year students on major aspects of public health and practical demonstrations were given to these students at various venues in the City as well as within the Department. Final year students were also addressed on death certification, notification of infectious diseases and other legal obligations of the practitioner in the field of preventive medicine.

Dr. Mackenzie delivered an address to the Annual General Meeting of the Durban Mental Health Society in August, the theme being "Tomorrow's Citizen", the child and adolescent of today. He also attended, with a number of his staff, the Biennial General Meeting of the South African National Council for the Aged held here in November.

The Biennial Health Congress held in Port Elizabeth between 6th and 10th November was attended by the Deputy City Medical Officer of Health and the Chief Health Inspector.

The Department was represented by the Assistant Medical Officer of Health, Dr. N.L. Becker, at the Tuberculosis Symposium in Port Elizabeth in April, and the South African National Council for Child Welfare Meeting in Cape Town from 27th August to 1st September being accompanied by the Chief Health Visitor on the latter occasion. The Chief Health Visitor was also present at the South African Nursing Association's Community Health Care Symposium in Johannesburg in October.

The Veterinary Medical Officer participated in the University of Pretoria's Veterinary Science Course on "Diseases of the Bovine Udder" from 19th to 23rd June,1972.

Nine final year Veterinary Science students spent three weeks vacation practice seeing veterinary public health at first hand in this Department and at the Abattoir.

Pharmacy students from the Durban-Westville University spent one day in the Department to gain an insight into the workings of an urban health department.

## PROPOSED LEGISLATION

As one of the major urban centres in the Republic, it is understandable that this local health authority should be consulted respecting proposed legislative measures, or be desirous of submitting constructive comment thereon of its own volition as circumstances dictate. During 1972 the public health implications arising from a number of proposals were examined.

Memoranda were lodged arising from the Health Bill, in support of which the City Medical Officer of Health also gave evidence, the Hazardous Substances Bill and the Licences Draft Ordinance 1972. It was also found necessary to offer suggestions to the appropriate authority respecting certain terms of the Foodstuffs, Cosmetics and Disinfectants Bill, the Draft Mental Health Act and the Atmospheric Pollution Prevention Act.

## STAFF EXAMINATION SUCCESSES

(a) National Diploma in Public Health Nursing:

| | |
|---|---|
| Miss S.A. Clifford | Clinic Sister |
| Mrs. C.W.J. Meintjies | Lecturer (Coloured) |
| Miss V.R. Gyadin | Nurse (Indian) |
| Mrs. O. Mlaba* | Lecturer (Bantu) |

* First class pass.

(b) National Diploma for Health Inspectors:

| | |
|---|---|
| H. Gaze<br>S.P. Knowles<br>B.T. Scott<br>R.H. Uren | Health Assistant |
| D. Wolmarans | Chief Clerk |

## NURSING AWARDS

(a) Student Nurses:

The City Council makes available each year suitable awards to trainees at general hospitals in the City selected in recognition of outstanding qualities as students. During

1972 awards were bestowed as follows:-

Addington Hospital (Provincial):

Gold Medal : Miss Leslie Jean Iler
Silver Medal : Miss Anne Marie Jenkinson

Entabeni Hospital (Private):

Gold Fob Watch : Miss Andree Anne Tichelen
Silver Fob Watch : Miss Rosemary Ann Harris

St. Augustine's Hospital (Private):

Gold Fob Watch : Miss Rosalie Dianne Pearce
Silver Fob Watch : Sister Catherine

R.K. Khan Hospital (Provincial)(Indian):

Gold Fob Watch : Miss Veronica Priscilla Pather
Silver Fob Watch : Miss Noroonessa Ismail

King Edward VIII Hospital (Provincial) (Non-White):

Gold Fob Watch : Miss Hope Ntshangase
Silver Fob Watch : Miss Nomahlubi Menyo

McCord Zulu Hospital (Private):

Gold Fob Watch : Miss Nomana A. Mngambi

(b) Student Nurses (Auxillary):

Many changes have been effected in nurses' training and education in recent years and a major step taken to relieve the shortage of nursing personnel in hospitals was the introduction in 1970 of a position of auxillary nurse. The principal duty is to carry out bedside nursing of patients and the period of tuition occupies two years.

The City Council was of the opinion that recognition in like manner should be extended to this class of student nurse and resolved on 26th June, 1972, to authorise awards to the most outstanding candidates at the three White and four Non-White hospital training institutions, and runners-up if deemed warranted, in the form of travel clocks and suitably worded certificates. The first awards in this category will be made in 1973.

(c) Addington Hospital Centenary Bursary:

The City Council in 1967 approved an annual grant to be awarded each year to a nurse trained at the hospital, or who completed midwifery training there, to assist her to undertake a course in mothercraft at an approved institution.

Applications were invited but there was no response for the present year.

MEDICAL BUREAU

The main activities of this section of the department are:-

(a) The pre-employment examination of White, Coloured and Indian entrants to departments of the Municipal Service, to determine :-

(i) their physical suitability for the work for which they have applied; and

(ii) their health viz-a-viz the provisions of the Rules of the Durban Corporation Superannuation Fund;

(b) a medical consultative service for certain members of the Fire, Police, Beach and Licensing Departments of the City Council who, engaged prior to 1st August, 1965, have elected to continue to have free medical attention for themselves rather than become members of the Municipal Medical Aid Society (Natal); and

(c) the convening of Medical Boards at the request of Heads of Departments for the assessment of the state of health of employees in relation to their fitness to carry out their present duties.

These activities are summarised as follows :-

| Service | White | | Non-White | Total |
|---|---|---|---|---|
| | Males | Females | | |
| Pre-employment examinations | 1 299<br>(1 475) | 362<br>(336) | 794<br>(651) | 2 455<br>(2 462) |
| Consultations | 618<br>( 570) | -<br>( 1) | -<br>( 1) | 618<br>(572) |
| Medical Boards | 10<br>( 8) | 3<br>( 2) | 16<br>( 8) | 29<br>( 18) |

The Senior Clinical Medical Officer carries out certain other functions which include public health supervision of infectious disease inpatients being the local authority's responsibility in fever hospitals in Durban, conducting Vi-testing and immunization clinics for certain foodhandlers, relief duties when necessary at departmental clinics and any particular investigations of a clinical nature.

## MEDICAL EXAMINATION OF BANTU WORK-SEEKERS

Male Bantu seeking employment in the City are medically examined at the Municipal Bantu Administration Department by their staff prior to registration. During 1972 the following examinations were performed :-

| | |
|---|---|
| Adults | 51 988 |
| Juveniles | 11 130 |
| | 63 118 |

This figure is just under 9 000 examinations less than in 1971 (72 092).

Male Bantu were routinely vaccinated on the occasion of their medical examination and during the year, 61 934 vaccinations were performed. In addition, 1 423 Bantu were referred to the Special Clinic suspected to be suffering from venereal disease. A further 82 males were suspected to be suffering from bilharzia and were referred to hospital for investigation, while nine were referred for scabies treatment.

Work seekers from rural areas and domestic servants changing their employment were routinely X-Rayed for evidence of pulmonary tuberculosis at this Department's central Chest Clinic on behalf of the Bantu Administration Department. During the year the following figures were recorded:-

| | Male | Female | Total |
|---|---|---|---|
| Total persons X-Rayed | 17 620 | 5 260 | 22 880 |
| Cases of active pulmonary tuberculosis discovered | 115 | 19 | 134 |
| As percentage of total Bantu X-Rayed | 0,65 | 0,36 | 0,59 |
| Cases of presumably inactive pulmonary tuberculosis discovered | 95 | 27 | 122 |
| As percentage of total X-Rayed | 0,54 | 0,51 | 0,53 |

## XIV. STAFF AND FINANCIAL SUMMARY

### AMENDMENTS TO STAFF ESTABLISHMENT

### ADDITIONS

| Section | Group | Designation of Post | No. of Posts | Remarks | Council Authority |
|---|---|---|---|---|---|
| Health Inspection | White | Health Assistant | 6 | Shortage of Health Inspectors | 14.12.72 |
| " | " | Laboratory Assistant (Entomology) | 1 | Insect pest, primarily anopheles mosquito identification | 28. 2.72 |
| " | Bantu | Overseer | 1 | | 31. 1.72 |
| " | " | " | 2 | Malaria control: Newlands area | 20.11.72 |
| Family Health | White | +Clinical Medical Officer (Part-time) | 2 | Family planning | 27.3.72 |
| Administration | White | Senior Clerk (Grade III) | 1 | Upgrade from Clerk | 31.7.72 w.e.f. 1.8.72 |
| " | " | Clerk | 1 | Expansion of financial section | 15.5.72 |
| " | " | Woman Clerk | 1 | | 15.5.72 |
| " | " | Senior Woman Assistant | 1 | Upgrade from Woman Assistant | 15.5.72 |
| " | " | Woman Assistant | 1 | Transfer from Durban Chest Clinic | 29.5.72 |
| " | Indian | Clerk (Grade I) | 1 | Re-organisation of Records | 23.10.72 |
| Epidemiology | Bantu | Overseer | 1 | | 27. 3.72 |

( + On 25.9.1972 the City Council approved unlimited number of part-time medical officers for family health/family planning clinics subject to maximum of 220 hours in all per week. State Health Department approval is still awaited).

AMENDMENTS TO STAFF ESTABLISHMENT (cont.)

DELETIONS

| Section | Group | Designation of Post | No.of Posts | Remarks | Council Authority |
|---|---|---|---|---|---|
| Health Inspection | White | General Assistant | 1 | | 31.1.72 |
| " | " | " | 1 | Converted to Laboratory Assistant (Entomology) | 28.2.72 |
| Administration | White | Woman Assistant | 1 | | 15.5.72 |
| " | " | Clerk | 1 | | 15.5.72 |
| " | " | Clerk | 1 | | 31.7.72 w.e.f. 1.8.72 |
| Epidemiology | " | General Assistant | 1 | | 27.3.72 |
| Durban Chest Clinic | " | Woman Assistant | 1 | | 29.5.72 |

LONG SERVICE ALLOWANCE

The City Council approved long service allowances for both White and Non-White employees with effect from 1st October, on the following basis :-

| Service | % of Basic Salary |
|---|---|
| 20 years | 3 |
| 30 " | 4 |
| 35 " | 5 |

LEAVE PRIVILEGES

Leave entitlements for certain classes of employees were improved by the granting of additional annual leave and accumulative maxima.

## POST SUMMARY AS AT 31ST DECEMBER, 1972

| White | No. | Non-White | No. |
|---|---|---|---|
| Medical Officer | 17 | Health Inspector | 10 |
| Veterinary Medical Officer | 1 | Lecturer | 16 |
| Clerical | 51 | Health Visitor | 41 |
| Technician | 1 | Overseer | 7 |
| X-Ray Technician | 2 | Health Assistant | 59 |
| Radiographer | 2 | Nurse | 20 |
| Operator X-Ray | 1 | Spotter | 13 |
| Health Inspector | 56 | Nurse Aide | 60 |
| Health Visitor | 31 | Operator | 1 |
| Clinic Sister | 9 | Clerical | 2 |
| Clinic Assistant | 12 | General Assistant | 1 |
| Supervisor | 1 | Interpreter/Cleaner | 24 |
| General Assistant | 18 | Assistant | 15 |
| Laboratory Assistant | 3 | Watchman | 2 |
| Health Assistant | 28 | Labourer | 124 |
| General Assistant - Clerical (Unestablished) | 1 | | |
| | 234 | | 395 |

### + Medical Personnel (Part-time)

| | | |
|---|---|---|
| (a) Tuberculosis Clinic: | | |
| Consultant Radiologist | 1 | Dr. E.H. Fine, M.B.; B.Ch.; D.M.R.D.; R.C.P. |
| (b) Family Health and Immunization: | | |
| Consultant Obstetrician and Gynaecologist | 1 | Dr. S.T. Trezise, M.B.; Ch.B.; M.R.C.O.G. |
| Consultant Paediatrician | 1 | Dr. J.H. Clyde, M.B.; B.Ch.; F.C.P.; D.C.H. |
| Clinical Medical Officer | - | Numbers unlimited but restricted to a maximum of 220 hours per week. |

+ Not reflected in Staff Establishment Table.

## STAFF ESTABLISHMENT

The authorised establishment as at 31st December, 1972, was 234 White and 395 Non-White staff members, subdivided as follows:-

| ADMINISTRATIVE SECTION: | No. |
|---|---|
| White: | |
| City Medical Officer of Health, Dr. C.R. Mackenzie, M.B.; B.Ch.; D.P.H.; D.T.M. & H. (Rand); F.R.S.H.; F.I.P.H. | 1 |
| Deputy City Medical Officer of Health, Dr. G.L. Hilton-Barber, M.B.; Ch.B.; D.P.H. | 1 |
| Assistant Medical Officer of Health, Dr. N.L. Becker, M.B.; Ch.B.; D.P.H.; B.Com. | 1 |
| Assistant Medical Officer of Health, Dr. N. Salhus, M.B.; Ch.B.; D.P.H. (w.e.f. 4.2.1972) | 1 |
| Personal Assistant, Poplett, D.J., M.R.S.H. | 1 |
| Principal Assistant, Donkin, F.D. (retired 28.2.1972) Kibble, G.A. (w.e.f. 1.3.1972 Cert.R.S.H. | 1 |
| Senior Assistant(Technical), Kibble, G.A. Cert. R.S.H. (to 28.2.1972) Behn, A.L. Cert. R.S.H. (w.e.f. 4.4.1972) | 1 |
| Senior Assistant (Financial), Dyer, R.B. Cert. R.S.H. | 1 |
| Chief Clerk (Grade I, 2) (Grade II, 2) | 4 |
| Senior Clerk (Grade I, 1) (Grade II, 4) (Grade III, 1) | 6 |
| Records Clerk (Woman) | 1 |
| Woman Clerk | 3 |
| Clerk | 8 |
| Principal Woman Assistant | 2 |
| Senior Woman Assistant | 4 |
| Woman Assistant | 7 |
| Chief Typist | 1 |
| Senior Typist | 1 |
| Typist | 4 |
| General Assistant (Unestablished) | 1 |
| Non-White: | |
| Health Assistant (Bantu) | 1 |
| Operator (Indian) | 1 |
| Clerk (Grade I) (Indian) | 1 |
| Clerk (Grade III) (Indian) | 1 |
| Assistant (Indian) | 7 |
| Watchman (Bantu) | 2 |
| Labourer (Bantu) | 1 |
| Total | 64 |

Staff Summary

| | |
|---|---|
| White | 50+ |
| Indian | 10 |
| Bantu | 4 |

(+ includes unestablished position)

| EPIDEMIOLOGY (embracing tuberculosis, infectious diseases and venereal diseases control) | No. |
|---|---|
| (a) Tuberculosis: | |
| White: | |
| Senior Clinical Medical Officer, Dr. E.A. MacIldowie, L.M.S.; Dr. P.R. Henson, M.R.C.S.;L.R.C.P.; D.P.H.; Dr. R.H. Brown, M.B.;Ch.B.; D.P.H.; D.I.H. | 3 |
| Clinical Medical Officer, Dr.R.W.W. Bowes, M.R.C.S.; L.R.C.P.; M.A. (Cantab.); Dr. A.D. Nisbet, M.B.; B.Ch.; Dr. T.F. Kethro, M.B.; Ch.B.; D.P.H.; D.I.H.(to 20.8.1972); Dr. W. Viljoen, M.B.; B.Ch.;(resigned 31.12.1972) Dr. E.M. Fisher, M.B.; B.Ch.; (w.e.f. 4.4.1972) | 4 |
| Senior Assistant (Administration) Behn,A.L. (to 3.4.1972) Aitkenhead,V.J. Cert. R.S.H. (w.e.f. 16.5.1972) | 1 |
| Health Inspector | 1 |
| Chief Clerk (Grade II) | 1 |
| X-Ray Technician | 2 |
| Radiographer | 2 |
| Operator X-Ray | 1 |
| Health Visitor | 5 |
| Clinic Sister | 4 |
| Woman Clerk | 1 |
| Woman Assistant | 1 |
| Clinic Assistant | 3 |
| Typist | 1 |
| Non-Whites | |
| Nurse (Indian 1, Bantu 1) | 2 |
| Health Assistant (Indian 12,Bantu 21) | 33 |
| Nurse Aide (Indian 4, Coloured 1,Bantu 7 ) | 12 |
| Interpreter/Cleaner (Indian 1, Bantu 4) | 5 |
| Labourer (Bantu) | 6 |
| Total | 88 |

Staff Summary

| | |
|---|---|
| White | 30 |
| Coloured | 1 |
| Indian | 18 |
| Bantu | 39 |

(b) Infectious Diseases — No.

White:

| | |
|---|---|
| Senior Health Inspector, McIver, E.I. Certs. R.S.H.; Meat and other Foods. | 1 |
| Health Visitor | 1 |
| General Assistant | 1 |

Non-White:

| | |
|---|---|
| Overseer (Bantu) | 1 |
| Labourer (Indian) | 1 |
| Total | 5 |

Staff Summary:

| | |
|---|---|
| White | 3 |
| Indian | 1 |
| Bantu | 1 |

(c) Venereal Diseases Clinic

White:

| | |
|---|---|
| Senior Clinical Medical Officer, Dr. S. Ward, M.R.C.S.; L.R.C.P. | 1 |
| Clinical Medical Officer, Dr. H.B. Savage, M.R.C.S.; L.R.C.P. | 1 |
| Vacant | 1 |

Non-White:

| | |
|---|---|
| Nurse (Bantu) | 4 |
| Health Assistant (Bantu) | 9 |
| Interpreter/Cleaner (Bantu) | 1 |
| Total | 17 |

Staff Summary:

| | |
|---|---|
| White | 3 |
| Bantu | 14 |

HEALTH INSPECTION

White:

| | |
|---|---|
| Chief Health Inspector, Ashdown, N.D.* | 1 |
| Deputy Chief Health Inspector, Crickmore, C.R.A. | 1 |
| Senior Health Inspector<br>Clark, A.G.<br>Green, C.E.O.*<br>Harris, J.K. (resigned 9.3.1972)<br>Pearman, E.F.J.*(w.e.f. 21.3.1972)<br>Hogan, J.P.*<br>Griffin, R.E.**<br>Knowles, D.H.*<br>Phillips, L.G.F.*<br>Marsh, H.N.*<br>Roberts, K.W.C.**<br>Schou, M.S.*<br>Spencer, D.W.**<br>Sutherland, F.T.* | 12 |
| Health Inspector | 39 |
| Laboratory Assistant (Entomology) | 1 |
| Health Assistant | 28 |
| Pest Control:<br>Supervisor | 1 |
| Senior General Assistant | 1 |
| General Assistant | 7 |
| Rodent Control: General Assistant | 7 |

Non-White:

| | |
|---|---|
| Health Inspector (Indian 8, Bantu 2) | 10 |
| Overseer (Indian 1, Bantu 4) | 5 |
| Health Assistant (Indian 4, Bantu 3) | 7 |
| Assistant (Indian) | 7 |
| Spotter (Indian 3, Bantu 10) | 13 |
| Labourer (Indian 12, Bantu 104) | 116 |
| Total | 256 |

Note: All Health Inspectors hold a certificate recognised in terms of the Public Health Act and such additional qualifications as indicated. * Meat & Other Foods Certificate
** Tropical Hygiene Certificate

Staff Summary

| | |
|---|---|
| White | 98 |
| Indian | 35 |
| Bantu | 123 |

VETERINARY HYGIENE — No.

White:

| | |
|---|---|
| Veterinary Medical Officer, Dr. W.B. Hobbs, B.V.Sc. | 1 |
| Laboratory Assistant | 2 |

Non-White:

| | |
|---|---|
| Assistant (Laboratory) (Indian) | 1 |
| Total | 4 |

Staff Summary

| | |
|---|---|
| White | 3 |
| Indian | 1 |

FAMILY HEALTH AND IMMUNIZATION

White:

| | |
|---|---|
| Senior Clinical Medical Officer, Dr. H.A.B. Pletts, M.B.; B.Ch. | 1 |
| Clinical Medical Officer, Dr. H.E. Rose, M.B.; Ch.B. | 1 |
| Chief Health Visitor, Rankin, M.H.E. xx | 1 |
| Deputy Chief Health Visitor, Harding, E.xx(to 19.8.72)<br>Stead, R.J.xx(w.e.f. 20.9.72) | 1 |
| Senior Health Visitor, Stead, R.J.xx(promoted 20.9.72)<br>Tyzack, P.M. x (w.e.f. 28.11.72) | 1 |
| Health Visitor | 21 |
| Clinic Sister | 5 |
| Clinic Assistant | 9 |

Non-White:

| | |
|---|---|
| Senior Health Visitor (Indian 2, Bantu 2) | 4 |
| Health Visitor (Coloured 4, Indian 15, Bantu 18) | 37 |
| Nurse (Indian 10, Bantu 4) | 14 |
| Overseer (Indian) | 1 |
| Health Assistant (Indian 5, Bantu 4) | 9 |
| Nurse Aide (Coloured 5, Indian 27, Bantu 16) | 48 |
| General Assistant (Indian) | 1 |
| Interpreter/Cleaner (Indian 10, Bantu 8) | 18 |
| Total | 172 |

Staff Summary

| | |
|---|---|
| White | 40 |
| Coloured | 9 |
| Indian | 71 |
| Bantu | 52 |

x General Nursing, Midwifery, Health Visitors and School Nurses Certificates.
xx Mothercraft Certificate in addition to above

HEALTH EDUCATION

White:

| | |
|---|---|
| Senior Health Inspector, Hazle A.D., Certs. R.S.H.; Meat & Other Foods; Tropical Hygiene | 1 |
| Technician | 1 |
| Health Visitor | 1 |
| General Assistant | 2 |

Non-White:

| | |
|---|---|
| Lecturer (Coloured 1, Indian 1, Bantu 2) | 4 |
| Assistant Lecturer (Bantu) | 1 |
| Junior Lecturer (Indian 6, Bantu 5) | 11 |
| Total | 21 |

Staff Summary

| | |
|---|---|
| White | 5 |
| Coloured | 1 |
| Indian | 7 |
| Bantu | 8 |

MEDICAL BUREAU

| | |
|---|---|
| Senior Clinical Medical Officer, Dr. M. Casson, M.R.C.S.;L.R.C.P.(retired 31.7.72)<br>Dr. T.F. Kethro, M.B.; Ch.B.; D.P.H. D.I.H. (w.e.f. 21.8.72) | 1 |

GROUP SUMMARY

| | |
|---|---|
| White | 233= |
| Coloured | 11 |
| Indian | 143= |
| Bantu | 241 |
| Total | 628 |

(= Part-time Medical Officers not included)

## FINANCIAL SUMMARY

An abbreviated statement of the cost, excluding capital expenditure, of the services undertaken by the City Health Department for the financial year ended 31st July, 1972, with comparative figures for the preceding year, is set out below :-

| | 1971/72 | 1970/71 |
|---|---|---|
| | R | R |
| **Expenditure** | | |
| Salaries, wages and allowances | 1 414 601 | 1 286 594 |
| Medical Requisites | 54 464 | 48 394 |
| Tuberculosis Hospitalisation - Government Hospitals: net cost | ----- | 35 346 |
| Other Hospitals: gross cost | 136 443 | 163 813 |
| Hospitalisation of Infectious Diseases including Venereal Diseases | 42 193 | 26 128 |
| Transport and Subsidised Locomotion | 88 309 | 74 438 |
| Miscellaneous, including Electricity, Insurance, Rents, Rates, Telephones, Stationery, Maintenance and Loan Charges | 383 015 | 313 025 |
| | 2 119 525 | 1 947 738 |

| **Income** | 1971/72 | 1970/71 | | |
|---|---|---|---|---|
| | R | R | | |
| General, including hospital fees recovered | 71 526 | 78 323 | | |
| Government part-refunds: Public Health Act | 844 804 | 685 573 | | |
| Health Services debited to Bantu Hostels and Locations | 121 692 | 137 776 | 1 038 022 | 901 672 |
| | | Net Cost | 1 081 503 | 1 046 066 |

1971/1972

GROSS EXPENDITURE : R2 119 525

WHERE IT CAME FROM

FOR EACH

R

WHERE IT WENT

BOROUGH FUND
REVENUE ACCOUNT — 51c

GOVERNMENT PART REFUND ON SALARIES, HOSPITAL FEES, CLINICS AND HOSPITAL FEES RECOVERED — 40c

BANTU REVENUE CONTRIBUTION — 6c

FEES AND GENERAL INCOME — 3c

SALARIES, WAGES, ALLOWANCES AND ALLIED STAFF EXPENDITURE — 67c

MISCELLANEOUS, INCLUDING ELECTRICITY WATER, TELEPHONE, RENTS, RATES, INSURANCE ETC. — 14c

HOSPITAL AND AMBULANCE FEES, MEDICINES AND LABORATORY SERVICES — 12c

LOAN CHARGES ON CAPITAL — 5c

REPAIRS, MAINTENANCE AND RENEWALS — 2c

APPLIED TO INDIVIDUAL SERVICES

FAMILY HEALTH — 26c

HEALTH INSPECTION INCLUDING FIELD HYGIENE — 25c

TUBERCULOSIS CONTROL AND CLINICS — 25c

ADMINISTRATION — 12c

RENT, RATES, ELECTRICITY, TELEPHONES AND CLEANING — 7c

HEALTH EDUCATION — 3c

VENEREAL DISEASES — 2c

NET COST PER CAPITA : R1,40 PER ANNUM

POPULATION : 770 747

CAUSES OF DEATH 1972 APPENDIX 'A'

(Classified according to International Intermediate List of 150 Causes from Eighth Revision, World Health Organization, 1965)

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 |
| A 2 | Typhoid fever | - | - | - | 1 | - | - | - | 1 | 3 | 1 | 4 | 5 | - | - | - | - | 3 | 1 | 4 | 7 |
| A 4 | Bacillary dysentery and amoebiasis | 1 | - | 1 | - | - | - | - | - | 2 | 2 | 4 | 6 | 1 | 1 | 2 | - | 4 | 3 | 7 | 6 |
| A 5 | Enteritis and other diarrhoeal diseases | 2 | 3 | 5 | 4 | 7 | 5 | 12 | 7 | 43 | 46 | 89 | 85 | 41 | 30 | 71 | 102 | 93 | 84 | 177 | 198 |
| A 6 | Tuberculosis of respiratory system | 6 | 2 | 8 | 1 | - | 1 | 1 | 6 | 34 | 14 | 48 | 50 | 14 | 5 | 19 | 16 | 54 | 22 | 76 | 73 |
| A 7 | Tuberculosis of meninges and central nervous system | 1 | - | 1 | - | - | - | - | 2 | 3 | 5 | 8 | 3 | 1 | 1 | 2 | 7 | 5 | 6 | 11 | 12 |
| A 8 | Tuberculosis of intestines, peritoneum and mesenteric glands | - | - | - | - | - | - | - | - | 1 | 2 | 3 | 1 | - | - | - | 1 | 1 | 2 | 3 | 2 |
| A 10 | Other tuberculosis, including late effects | - | - | - | - | - | - | - | 1 | - | 3 | 3 | 4 | 1 | 1 | 2 | 2 | 1 | 4 | 5 | 7 |
| A 15 | Diphtheria | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - | 1 | - | 1 | - |
| A 16 | Whooping Cough | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| A 19 | Meningococcal infection | - | - | - | - | - | 1 | 1 | - | 1 | - | 1 | 1 | 1 | - | 1 | - | 2 | 1 | 3 | 1 |
| A 20 | Tetanus | - | - | - | - | - | 1 | 1 | - | 3 | 2 | 5 | 3 | 1 | 5 | 6 | 4 | 4 | 8 | 12 | 7 |
| A 21 | Other bacterial diseases | 7 | 7 | 14 | 9 | 2 | 3 | 5 | 1 | 12 | 5 | 17 | 10 | 9 | 6 | 15 | 10 | 30 | 21 | 51 | 30 |
| A 22 | Acute poliomyelitis | - | - | - | - | - | - | - | - | - | - | - | 3 | - | - | - | 1 | - | - | - | 4 |
| A 25 | Measles | - | - | - | 2 | - | - | - | 2 | 11 | 13 | 24 | 24 | 3 | 6 | 9 | 15 | 14 | 19 | 33 | 43 |
| A 27 | Viral encephalitis | - | - | - | - | - | - | - | - | 2 | - | 2 | 1 | 2 | 2 | 4 | 1 | 4 | 2 | 6 | 2 |
| A 28 | Infectious hepatitis | 1 | - | 1 | - | 1 | - | 1 | - | 3 | 1 | 4 | 4 | - | - | - | - | 5 | 1 | 6 | 4 |
| A 29 | Other viral diseases | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | 1 | 1 | 1 | - | 1 | 2 |
| A 34 | Congenital syphilis | - | - | - | - | - | 1 | 1 | - | - | - | - | 1 | - | - | - | - | - | 1 | 1 | 1 |
| A 44 | All other infective and parastic diseases | 1 | - | 1 | - | 1 | - | 1 | - | - | - | - | - | - | - | - | 1 | 2 | - | 2 | 1 |
| A 45 | Malignant neoplasm of buccal cavity and pharynx | 8 | 3 | 11 | 5 | - | 1 | 1 | 1 | 2 | - | 2 | 3 | 1 | 1 | 2 | 2 | 11 | 5 | 16 | 11 |

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 |
| A 46 | Malignant neoplasm of oesophagus | 2 | - | 2 | 6 | 2 | - | 2 | 3 | 26 | 9 | 35 | 29 | 2 | 7 | 9 | 9 | 32 | 16 | 48 | 47 |
| A 47 | Malignant neoplasm of stomach | 10 | 7 | 17 | 13 | 2 | - | 2 | 2 | 4 | - | 4 | 7 | 10 | 4 | 14 | 16 | 26 | 11 | 37 | 38 |
| A 48 | Malignant neoplasm of intestine, except rectum | 15 | 10 | 25 | 23 | - | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 2 | 4 | 8 | 19 | 14 | 33 | 33 |
| A 49 | Malignant neoplasm of rectum and rectosigmoid junction | 8 | 4 | 12 | 6 | - | - | - | - | - | - | - | - | 3 | - | 3 | 3 | 11 | 4 | 15 | 9 |
| A 50 | Malignant neoplasm of larynx | 3 | - | 3 | 4 | 1 | - | 1 | 1 | - | - | - | 4 | 2 | - | 2 | 1 | 6 | - | 6 | 10 |
| A 51 | Malignant neoplasm of trachea, bronchus and lung | 54 | 17 | 71 | 63 | 8 | 1 | 9 | 6 | 23 | 1 | 24 | 15 | 9 | 5 | 14 | 9 | 94 | 24 | 118 | 93 |
| A 52 | Malignant neoplasm of bone | - | 1 | 1 | 3 | - | - | - | - | - | - | - | 1 | - | - | - | 4 | - | 1 | 1 | 8 |
| A 53 | Malignant neoplasm of skin | 4 | 3 | 7 | 5 | - | - | - | - | 1 | - | 1 | 1 | - | - | - | 1 | 5 | 3 | 8 | 7 |
| A 54 | Malignant neoplasm of breast | - | 20 | 20 | 10 | - | 1 | 1 | 1 | - | 7 | 7 | 2 | - | 1 | 1 | 6 | - | 29 | 29 | 19 |
| A 55 | Malignant neoplasm of cervix uteri | - | 9 | 9 | 6 | - | - | - | - | - | 12 | 12 | 7 | - | 3 | 3 | 11 | - | 24 | 24 | 24 |
| A 56 | Other malignant neoplasm of uterus | - | 2 | 2 | 4 | - | - | - | - | - | - | - | 2 | - | 1 | 1 | 4 | - | 3 | 3 | 10 |
| A 57 | Malignant neoplasm of prostate | 16 | - | 16 | 10 | 1 | - | 1 | - | 2 | - | 2 | - | - | - | - | - | 19 | - | 19 | 10 |
| A 58 | Malignant neoplasm of other and unspecified sites | 39 | 49 | 88 | 73 | 3 | 4 | 7 | 8 | 18 | 7 | 25 | 26 | 15 | 5 | 20 | 21 | 75 | 65 | 140 | 128 |
| A 59 | Leukaemia | 5 | 2 | 7 | 14 | 1 | - | 1 | 1 | 1 | 2 | 3 | 5 | 3 | 1 | 4 | 6 | 10 | 5 | 15 | 26 |
| A 60 | Other neoplasms of lymphatic and haematopoietic tissue | 9 | 12 | 21 | 10 | - | 1 | 1 | 1 | 2 | 1 | 3 | 6 | 4 | - | 4 | 2 | 15 | 14 | 29 | 19 |
| A 61 | Benign neoplasms and neoplasms of unspecified nature | - | 1 | 1 | 26 | - | - | - | 6 | - | 1 | 1 | 11 | - | 1 | 1 | 7 | - | 3 | 3 | 50 |
| A 64 | Diabetes mellitis | 1 | 4 | 5 | 9 | - | 3 | 3 | 4 | 4 | 7 | 11 | 17 | 11 | 11 | 22 | 25 | 16 | 25 | 41 | 55 |
| A 65 | Avitaminoses and other nutritional deficiency | - | - | - | - | 2 | 1 | 3 | 2 | 14 | 15 | 29 | 44 | 2 | 2 | 4 | 5 | 18 | 18 | 36 | 51 |
| A 66 | Other endocrine and metabolic diseases | - | - | - | 1 | - | - | - | 1 | 2 | 1 | 3 | 1 | 2 | 3 | 5 | 9 | 4 | 4 | 8 | 12 |
| A 67 | Anaemias | 4 | 3 | 7 | 2 | - | - | - | - | 1 | 1 | 2 | 2 | 3 | 4 | 7 | 2 | 8 | 8 | 16 | 6 |

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 |
| A 68 | Other diseases of blood and blood-forming organs | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 3 |
| A 69 | Psychoses | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - | 1 | - | 1 | - |
| A 70 | Neuroses, personality disorders and other non-psychotic mental disorders | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | 1 | 1 |
| A 72 | Meningitis | 5 | - | 5 | 3 | - | 3 | 3 | 4 | 12 | 5 | 17 | 24 | 4 | 2 | 6 | 14 | 21 | 10 | 31 | 45 |
| A 74 | Epilepsy | - | - | - | 2 | 3 | - | 3 | 2 | 1 | - | 1 | 5 | 3 | 2 | 5 | 3 | 7 | 2 | 9 | 12 |
| A 78 | Otitis media and mastoiditis | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 |
| A 79 | Other diseases of nervous system and sense organs | 7 | 3 | 10 | 8 | - | - | - | 2 | 6 | 4 | 10 | 10 | 4 | 1 | 5 | 15 | 17 | 8 | 25 | 35 |
| A 80 | Active rheumatic fever | - | - | - | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | 1 | - |
| A 81 | Chronic rheumatic heart disease | 1 | 2 | 3 | 4 | - | - | - | 3 | 1 | 1 | 2 | 3 | 4 | 5 | 9 | 10 | 6 | 8 | 14 | 20 |
| A 82 | Hypertensive disease | 13 | 16 | 29 | 8 | - | 1 | 1 | 7 | 15 | 6 | 21 | 32 | 25 | 22 | 47 | 32 | 53 | 45 | 98 | 79 |
| A 83 | Ischaemic heart disease | 252 | 172 | 424 | 430 | 7 | 6 | 13 | 16 | 9 | 1 | 10 | 9 | 174 | 60 | 234 | 241 | 442 | 239 | 681 | 696 |
| A 84 | Other forms of heart disease | 76 | 96 | 172 | 153 | 10 | 12 | 22 | 13 | 46 | 17 | 63 | 83 | 62 | 60 | 122 | 200 | 194 | 185 | 379 | 449 |
| A 85 | Cerebrovascular disease | 81 | 122 | 203 | 192 | 8 | 16 | 24 | 24 | 36 | 28 | 64 | 64 | 79 | 81 | 160 | 209 | 204 | 247 | 451 | 489 |
| A 86 | Diseases of arteries, arterioles and capillaries | 18 | 12 | 30 | 28 | 2 | 1 | 3 | 4 | 2 | 2 | 4 | 5 | 2 | 3 | 5 | 4 | 24 | 18 | 42 | 41 |
| A 87 | Venous thrombosis and embolism | 13 | 16 | 29 | 21 | 5 | 1 | 6 | 5 | 3 | 4 | 7 | 4 | 3 | 4 | 7 | 11 | 24 | 25 | 49 | 41 |
| A 88 | Other diseases of circulatory system | 6 | 2 | 8 | 7 | - | - | - | 2 | - | - | - | 2 | 1 | 3 | 4 | 1 | 7 | 5 | 12 | 12 |
| A 89 | Acute respiratory infections | - | - | - | 1 | - | - | - | - | - | - | - | 1 | 1 | 1 | 2 | 7 | 1 | 1 | 2 | 9 |
| A 90 | Influenza | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 | 3 | 1 | 1 | 2 | 3 |
| A 91 | Viral pneumonia | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | 1 | 1 | - |
| A 92 | Other pneumonia | 71 | 82 | 153 | 146 | 17 | 16 | 33 | 31 | 101 | 82 | 183 | 183 | 102 | 84 | 186 | 219 | 291 | 264 | 555 | 579 |

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F. | Tot. | 1971 | M | F | Tot. | 1971 |
| A 93 | Bronchitis, emphysema and asthma | 17 | 8 | 25 | 31 | 1 | 1 | 2 | 1 | 4 | 2 | 6 | 2 | 23 | 10 | 33 | 38 | 45 | 21 | 66 | 72 |
| A 95 | Empyema and asbscess of lung | 1 | - | 1 | 3 | 1 | 2 | 3 | 1 | - | 3 | 3 | 2 | 2 | - | 2 | - | 4 | 5 | 9 | 6 |
| A 96 | Other diseases of respiratory system | 14 | 19 | 33 | 24 | 2 | 1 | 3 | 5 | 14 | 11 | 25 | 69 | 10 | 6 | 16 | 12 | 40 | 37 | 77 | 110 |
| A 98 | Peptic ulcer | 3 | 3 | 6 | 6 | - | - | - | 1 | - | - | - | 2 | 1 | - | 1 | 5 | 4 | 3 | 7 | 14 |
| A 99 | Gastritis and duodenitis | 1 | - | 1 | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 | 1 | 2 | 1 | 3 | 1 |
| A 100 | Appendicitis | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| A 101 | Intestinal obstruction and hernia | 6 | 2 | 8 | 4 | 1 | - | 1 | - | 4 | - | 4 | 8 | 1 | - | 1 | 5 | 12 | 2 | 14 | 17 |
| A 102 | Cirrhosis of liver | 8 | 6 | 14 | 6 | 2 | 1 | 3 | - | 8 | 11 | 19 | 3 | 9 | 1 | 10 | 7 | 27 | 19 | 46 | 16 |
| A 103 | Cholelithiasis and cholecystitis | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| A 104 | Other diseases of digestive system | 18 | 20 | 38 | 39 | 4 | 4 | 8 | 9 | 40 | 23 | 63 | 254 | 17 | 6 | 23 | 75 | 79 | 53 | 132 | 377 |
| A 105 | Acute nephritis | 1 | 2 | 3 | - | - | - | - | - | - | - | - | - | 1 | 3 | 4 | - | 2 | 5 | 7 | - |
| A 106 | Other nephritis and nephrosis | 7 | 5 | 12 | 4 | - | - | - | - | 3 | 4 | 7 | 4 | 6 | 5 | 11 | 4 | 16 | 14 | 30 | 12 |
| A 107 | Infections of kidney | 2 | 2 | 4 | 3 | - | 1 | 1 | 1 | - | - | - | 1 | 1 | - | 1 | 9 | 3 | 3 | 6 | 14 |
| A 109 | Hyperplasia of prostate | - | - | - | 2 | - | - | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | 1 | 2 |
| A 111 | Other diseases of genito-urinary system | 9 | 10 | 19 | 14 | - | - | - | 1 | 3 | 2 | 5 | 13 | 6 | 1 | 7 | 27 | 18 | 13 | 31 | 55 |
| A 113 | Haemorrhage of pregnancy and childbirth | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 2 |
| A 115 | Other and unspecified abortion | - | 1 | 1 | - | - | 1 | 1 | - | - | 1 | 1 | 5 | - | - | - | 4 | - | 3 | 3 | 9 |
| A 116 | Sepsis of childbirth and the puerperium | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| A 117 | Other complications of pregnancy, childbirth and the puerperium | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 | - | 1 | 1 | 2 |

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 |
| A 119 | Infections of skin and subcutaneous tissue | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - |
| A 120 | Other diseases of skin and subcutaneous tissue | - | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | 2 | 2 | 3 |
| A 121 | Arthritis and spondylitis | - | 1 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 1 |
| A 123 | Osteomyelitis and periostitis | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| A 125 | Other diseases of musculoskeletal system and connective tissue | 1 | 3 | 4 | 2 | - | - | - | 1 | - | - | - | 1 | - | 2 | 2 | 4 | 1 | 5 | 6 | 8 |
| A 126 | Spina bifida | - | 1 | 1 | - | - | - | - | - | - | 1 | 1 | - | 1 | - | 1 | 2 | 1 | 2 | 3 | 2 |
| A 127 | Congenital anomalies of heart | 1 | - | 1 | 3 | - | 1 | 1 | 1 | 1 | 3 | 4 | 2 | 4 | 3 | 7 | 4 | 6 | 7 | 13 | 10 |
| A 128 | Other congenital anomalies of circulatory system | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - |
| A 130 | All other congenital anomalies | 2 | 2 | 4 | 5 | 1 | 1 | 2 | - | 1 | 1 | 2 | 10 | 6 | 4 | 10 | 7 | 10 | 8 | 18 | 22 |
| A 131 | Birth injury and difficult labour | 1 | - | 1 | - | 1 | - | 1 | 1 | 10 | 5 | 15 | 16 | 2 | 1 | 3 | 2 | 14 | 6 | 20 | 19 |
| A 132 | Conditions of placenta and cord | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | 2 | 2 | - |
| A 133 | Haemolytic disease of newborn | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | - | - | 2 | 2 | - |
| A 134 | Anoxic and hypoxic conditions not elsewhere classified | 5 | 2 | 7 | 13 | 5 | 1 | 6 | 5 | 3 | 12 | 15 | 41 | 11 | 6 | 17 | 21 | 24 | 21 | 45 | 80 |
| A 135 | Other causes of perinatal morbidity and mortality | 27 | 29 | 56 | 20 | 22 | 16 | 38 | 17 | 55 | 46 | 101 | 118 | 135 | 122 | 257 | 113 | 239 | 213 | 452 | 268 |
| A 136 | Senility without mention of psychosis | 3 | 21 | 24 | 13 | - | 2 | 2 | 5 | 1 | 1 | 2 | - | 8 | 10 | 18 | 4 | 12 | 34 | 46 | 22 |
| A 137 | Symptoms and other ill-defined conditions | 81 | 79 | 160 | 132 | 19 | 21 | 40 | 44 | 436 | 445 | 881 | 572 | 169 | 133 | 302 | 267 | 705 | 678 | 1 383 | 1 015 |
| AE138 | Motor Vehicle Accidents | 3 | 1 | 4 | 13 | - | - | - | 4 | 15 | 10 | 25 | 64 | 2 | - | 2 | 51 | 20 | 11 | 31 | 132 |

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 |
| AE 139 | Other transport accidents | - | - | - | 3 | - | - | - | - | 12 | 1 | 13 | 15 | - | - | - | 3 | 12 | 1 | 13 | 21 |
| AE 140 | Accidental poisoning | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | 3 | - | - | - | 5 |
| AE 141 | Accidental falls | - | - | - | 5 | - | - | - | 2 | 3 | 1 | 4 | 8 | 2 | - | 2 | 2 | 5 | 1 | 6 | 17 |
| AE 142 | Accidents caused by fires | - | - | - | - | - | - | - | - | 1 | - | 1 | 4 | - | - | - | 10 | 1 | - | 1 | 14 |
| AE 143 | Accidental drowning and submersion | - | - | - | - | - | - | - | - | - | - | - | 10 | - | - | - | 5 | - | - | - | 15 |
| AE 145 | Accidents mainly of industrial type | - | - | - | 3 | - | - | - | - | 1 | - | 1 | 3 | - | - | - | 4 | 1 | - | 1 | 10 |
| AE 146 | All other accidents | - | - | - | 3 | - | - | - | 2 | 2 | - | 2 | 32 | - | - | - | 7 | 2 | - | 2 | 44 |
| AE 147 | Suicide and self-inflicted injury | 1 | - | 1 | 16 | - | - | - | - | - | 2 | 2 | - | - | - | - | 21 | 1 | 2 | 3 | 37 |
| AE 148 | Homicide and injury purposely inflicted by other persons: legal intervention | - | - | - | 4 | - | - | - | 3 | 37 | 6 | 43 | 47 | - | - | - | 15 | 37 | 6 | 43 | 69 |
| AE 149 | Injury undetermined whether accidentally or purposely inflicted | 71 | 15 | 86 | 1 | 23 | 8 | 31 | 2 | 38 | 3 | 41 | 56 | 131 | 31 | 162 | 52 | 263 | 57 | 320 | 111 |
| | TOTALS | 1 025 | 917 | 1 942 | 1 689 | 165 | 143 | 308 | 277 | 1 146 | 904 | 2 050 | 2 180 | 1 160 | 786 | 1 946 | 2 074 | 3 496 | 2 750 | 6 246 | 6 220 |
| | CRUDE DEATH RATES | 9,84 (8,68) | | | | 6,77 (6,28) | | | | 9,54 (10,43) | | | | 6,22 (6,81) | | | | 8,10 (8,27) | | | |

APPENDIX 'B'

## CAUSES OF DEATH IN RESPECT OF INFANTS (UNDER 1 YEAR) 1972

(Classified according to International Intermediate List of 150 Causes from Eighth Revision, World Health Organization, 1965)

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 |
| A 2 | Typhoid fever | - | - | - | - | - | - | - | 1 | - | 1 | 1 | 1 | - | - | - | - | - | 1 | 1 | 2 |
| A 5 | Enteritis and other diarrhoeal diseases | 1 | 1 | 2 | 1 | 7 | 4 | 11 | 4 | 38 | 35 | 73 | 71 | 35 | 24 | 59 | 75 | 81 | 64 | 145 | 151 |
| A 6 | Tuberculosis of respiratory system | - | - | - | - | - | - | - | - | 2 | - | 2 | 4 | - | - | - | - | 2 | - | 2 | 4 |
| A 7 | Tuberculosis of meninges and central nervous system | 1 | - | 1 | - | - | - | - | - | - | 2 | 2 | 1 | - | - | - | - | 1 | 2 | 3 | 1 |
| A 16 | Whooping cough | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| A 19 | Meningococcal infection | - | - | - | - | - | 1 | 1 | - | - | - | - | 1 | 1 | - | 1 | 1 | 1 | 1 | 2 | 2 |
| A 20 | Tetanus | - | - | - | - | - | - | - | - | 1 | 2 | 3 | 1 | - | 1 | 1 | 1 | 1 | 3 | 4 | 2 |
| A 21 | Other bacterial diseases | 2 | 1 | 3 | 1 | - | - | - | - | 10 | 3 | 13 | 3 | 4 | 3 | 7 | 6 | 16 | 7 | 23 | 10 |
| A 22 | Acute poliomyelitis | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 2 |
| A 25 | Measles | - | - | - | 1 | - | - | - | - | 3 | 7 | 10 | 9 | 2 | 3 | 5 | 5 | 5 | 10 | 15 | 15 |
| A 27 | Viral encephalitis | - | - | - | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | 1 | - |
| A 29 | Other viral diseases | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| A 34 | Congenital syphilis | - | - | - | - | - | 1 | 1 | - | - | - | - | 1 | - | - | - | - | - | 1 | 1 | 1 |
| A 61 | Benign neoplasms and neoplasms of unspecified nature | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| A 65 | Avitaminoses and other nutritional deficiency | - | - | - | - | 1 | - | 1 | - | 8 | 5 | 13 | 16 | 1 | - | 1 | 1 | 10 | 5 | 15 | 17 |
| A 66 | Other endocrine and metabolic diseases | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - | 2 |
| A 67 | Anaemias | - | - | - | - | - | - | - | - | 1 | 1 | 2 | 1 | - | - | - | 1 | 1 | 1 | 2 | 2 |
| A 68 | Other diseases of blood and blood-forming organs | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 |
| A 72 | Meningitis | 2 | - | 2 | 1 | - | 3 | 3 | 3 | 5 | 2 | 7 | 15 | 2 | 2 | 4 | 6 | 9 | 7 | 16 | 25 |
| A 74 | Epilepsy | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 |
| A 79 | Other diseases of nervous system and sense organs | 1 | - | 1 | 1 | - | - | - | - | 1 | - | 1 | - | - | - | - | 3 | 2 | - | 2 | 4 |
| A 82 | Hypertensive disease | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | 1 |
| A 83 | Ischaemic heart disease | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - |
| A 84 | Other forms of heart disease | 1 | 2 | 3 | - | - | - | - | - | 1 | 1 | 2 | 5 | 1 | - | 1 | 7 | 3 | 3 | 6 | 12 |
| A 85 | Cerebrovascular disease | - | - | - | - | - | 1 | 1 | - | 2 | 1 | 3 | 4 | 3 | 3 | 6 | 4 | 5 | 5 | 10 | 8 |
| A 86 | Diseases of arteries, arterioles and capillaries | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | 1 | 1 | 2 | - |
| A 87 | Venous thrombosis and embolism | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 | 1 | - | 1 | 1 |
| A 89 | Acute respiratory infections | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 3 | - | - | - | 4 |
| A 91 | Viral pneumonia | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | 1 | 1 | - |
| A 92 | Other pneumonias | 3 | 1 | 4 | 2 | 5 | 5 | 10 | 6 | 44 | 48 | 92 | 78 | 33 | 36 | 69 | 66 | 85 | 90 | 175 | 152 |
| A 93 | Bronchitis, emphysema and asthma | - | - | - | 1 | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 | - | 1 | 1 | 3 |
| A 96 | Other diseases of respiratory system | 2 | - | 2 | - | - | - | - | 3 | 4 | 6 | 10 | 9 | 1 | 1 | 2 | 1 | 7 | 7 | 14 | 13 |
| A 98 | Peptic ulcer | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - |
| A101 | Intestinal obstruction and hernia | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | 2 |

| Cause Group | Cause of Death | WHITE | | | | COLOURED | | | | BANTU | | | | INDIAN | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 | M | F | Tot. | 1971 |
| A 104 | Other diseases of digestive system | - | - | - | - | 1 | - | 1 | 1 | 14 | 6 | 20 | 145 | 5 | - | 5 | 3 | 20 | 6 | 26 | 149 |
| A 111 | Other diseases of genito-urinary system | - | - | - | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | 1 | - |
| A 126 | Spina bifida | - | 1 | 1 | - | - | - | - | - | - | 1 | 1 | - | 1 | - | 1 | - | 1 | 2 | 3 | - |
| A 127 | Congenital anomalies of heart | 1 | - | 1 | 3 | - | 1 | 1 | - | 1 | 3 | 4 | 2 | 4 | 3 | 7 | 2 | 6 | 7 | 13 | 7 |
| A 128 | Other congenital anomalies of circulatory system | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - |
| A 130 | All other congenital anomalies | 2 | 1 | 3 | 5 | 1 | 1 | 2 | - | 1 | 1 | 2 | 9 | 6 | 4 | 10 | 6 | 10 | 7 | 17 | 20 |
| A 131 | Birth injury and difficult labour | 1 | - | 1 | - | 1 | - | 1 | 1 | 10 | 5 | 15 | 16 | 2 | 1 | 3 | 2 | 14 | 6 | 20 | 19 |
| A 132 | Conditions of placenta and cord | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | 2 | 2 | - |
| A 133 | Haemolytic disease of newborn | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | - | - | 2 | 2 | - |
| A 134 | Anoxic and hypoxic conditions not elsewhere specified | 5 | 1 | 6 | 13 | 5 | 1 | 6 | 5 | 3 | 12 | 15 | 41 | 11 | 6 | 17 | 21 | 24 | 20 | 44 | 80 |
| A 135 | Other causes of perinatal morbidity and mortality | 27 | 29 | 56 | 19 | 22 | 16 | 38 | 18 | 55 | 46 | 101 | 118 | 135 | 122 | 257 | 116 | 239 | 213 | 452 | 271 |
| A 137 | Symptoms and other ill-defined conditions | 1 | - | 1 | 4 | 4 | 3 | 7 | 11 | 155 | 182 | 337 | 234 | 25 | 12 | 37 | 33 | 185 | 197 | 382 | 282 |
| AE142 | Accidents caused by fires | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 |
| AE143 | Accidental drowning and submersion | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| AE149 | Injury undetermined whether accidentally or purposely inflicted | 1 | - | 1 | - | - | - | - | - | - | - | - | - | 2 | - | 2 | - | 3 | - | 3 | - |
| | TOTALS | 54 | 39 | 93 | 53 | 47 | 37 | 84 | 55 | 361 | 371 | 732 | 791 | 275 | 226 | 501 | 372 | 737 | 673 | 1 410 | 1 271 |
| | INFANT MORTALITY RATES (DEATHS OF INFANTS UNDER ONE YEAR PER 1 000 LIVE BIRTHS) | 27,47 (14,87) | | | | 50,82 (32,35) | | | | 77,39(85,63) | | | | 53,86 (41,55) | | | | 59,24 (54,19) | | | |

## Appendix 'C'

## Monitoring of Durban's Sea Sewage Outfalls

In an appendix to my Annual Report for 1971 the history of the City Council's efforts to secure a permanent improvement in the method of sewage disposal was set down in broad outline, giving some background to the work of the Steering Committee for the Monitoring of Durban's Sea Sewage Outfalls. During September 1972 "Municipal Administration and Engineering" published an article "The Monitoring of Durban's Beaches - A Summary for the Period 1964-1972" by W.D. Oliff of the National Institute for Water Research of the Council for Scientific and Industrial Research, and with due acknowledgements to the source, the article is published in extenso below :-

"The main objectives of this extensive survey, made by the National Institute for Water Research of the C.S.I.R. for Durban City Council between 1964 and 1972, were to determine if effluent discharges into the sea in the Durban area were causing bacterial contamination of the beaches, and if those effluents were having any deleterious effects on the marine life. Major outfalls, discharging at the harbour mouth and at Finnemore Place, numerous minor pipes and drains discharging into the surf and onto beaches, and also at the mouths of rivers and canals in the region, at times produced conditions that were aesthetically and microbiologically unacceptable.

An additional objective of the work was to monitor the effectiveness of improvements made to the sewerage and storm-water drainage systems of the city as a whole and of the beach front in particular. These improvements included the construction and operation of a northern, central and southern sewage works, the two offshore submarine pipelines, and the closing down of many minor discharges.

These objectives required different approaches. The amount of sewage contamination was most sensitively measured by a group of bacteriological tests for specific faecal organisms including pathogenic bacteria. The condition of the sea and the marine life was measured by chemical analysis of the sea water and of the beach and sea-bed sediments, in conjunction with biological analyses used on sampling, identifying, counting and comparing the animals in the beach and sea-bed sediments.

The bacteriological index has proved a sensitive measure of fluctuating pollution by faecal material. After the pipelines started operating fully, results showed a dramatic improvement in the sea, along the beaches and especially at the harbour mouth. Conditions have sometimes

varied since, however, owing to the bursting of certain sewers on land and to the occurrence of overflows at a number of isolated points. In fact, in a number of instances the first knowledge of these incidents apparently came from changes detected in the conditions of the sea. The last survey in November 1971, after repairs had been made, showed that 75% of the survey stations came into Class I according to our sensitive classification in contrast to only 18% of that class in 1964. This represents a tremendous improvement. The bathing beaches all fell into this highest-quality category. The few stations which did not fall into this class were all near known canals and outfalls.

Some sites of faecal pollution remain at the mouth of the Umgeni River, in the vicinity of the Fynnlands outfall, and at the Umlaas and Reunion canals.

The chemistry of the sediments, and the numbers and diversity of animals living in them are sensitive measures of the amount of organic material available. The limits of these parameters have been found and levels higher than these critical levels are a clear indication of enrichment of some sort, usually from pollution. The most important parameters for the beaches are a permanganate value less than 0,06 mg $O_2$/gm, and a faunal density less than 300 organisms per 18 litres of sand. For the marine sediments the important parameters are a permanganate value less than 1 mg/g and a faunal density less than 2000 organisms per litre.

Because settled sewage is a relatively dilute fluid it is not likely to result in great enrichment of the environment, and it is usually industrial organic waste which is responsible for this. The surveys of the chemistry and marine life in the beaches have not shown great changes since the introduction of the new system. This was because the bathing beaches initially were of good quality and have not changed; while the areas of the Umgeni river mouth, waste outfalls, and Umlaas and Reunion canals, the Finnemore Place outfall, industrial union canls, initially of poor quality, although improved, still reveal some enrichment. At the Umlaas canal the enrichment,(about twice normal levels) persisted for months despite the reduction in the load entering the sea which occurred when a strong organic industrial effluent was diverted to the pipeline. The level dropped nearer normal in the fourth survey after three months. Either the beach is taking a long time to recover or the organic load in the canal is still considerable.

The sea-sediments have been quite normal by chemical standards throughout the survey, and there has been a definite long-term reduction in the density of the fauna along the whole coast between Umbogintwini and Durban.

Special studies of the productivity of plankton in the area have indicated that conditions are perfectly normal, levels varying between 2 and 28 mg $C/m^3/6$ hrs; and it is clear that the marine life has been neither harmed nor encouraged.

Work at sea over the pipeline diffusers has only occasionally revealed the presence of sewage at the surface. During the temporary breakdown of the sludge-removal plant and the consequent discharge of untreated sewage, the plume and solids were seen at the surface on several occasions. Since full operation of the works has been resumed the plume is virtually undetectable, and analyses have revealed that the material rarely reaches the surface in any significant quantities. Dilutions greater than 1 000 times are usual over the pipelines.

Thus all the improvements effected have resulted in a dramatic restoration of aesthetic and bacteriological conditions at the harbour mouth, along the shore and at sea. Only at the few points mentioned above are conditions less satisfactory. In addition, silt from the flooding rivers still creates unsightly conditions at times but this cannot be controlled.

The general indications are that the disposal systems are operating effectively, that the discharges from the pipelines are having no material effect upon the environment and marine life, and that the bacteriological quality of the surf water has materially improved. In fact, the conditions at the popular bathing beaches now, judged by any of the most stringent standards, are excellent, and the use of properly designed pipelines for the disposal of effluent in this way has been completely vindicated.

RECOMMENDATIONS

1. Continued attention should be directed to all remaining outfalls and discharges into the surf zone.

2. The report on the monitoring of the pipelines clearly indicated the value of regular measurements of the degree of contamination of the beaches with faecal material, and it is recommended that monitoring should continue. The minimum monitoring should be half-yearly bacteriological checks at all stations along the beaches.

3. To ensure that the conditions on the sea bed do not materially alter it would be desirable to conduct surveys of the sediments in the vicinities of the pipeline diffusers, with concentration on the chemical and biological parameters."

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